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RESULTS OF TEST OA82 IN THE NASA/LRC 31-INCH CFHT
ON AN 0.010-SCALE MODEL (32-0) OF THE
SPACE SHUTTLE CONFIGURATION 3 TO DETERMINE
RCS JET FLOW FIELD INTERACTION
AND TO INVESTIGATE RT REAL GAS EFFECTS

By

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By

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Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: LRC CFHT 113
NASA Series Number: OA82
Model Number: 32-0
Test Dates: 9 through 16 August 1974
Occupancy Hours: 80

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ABSTRACT

Tests were conducted in the NASA Langley Research Center 31-inch Continuous Flow Hypersonic Wind Tunnel from 9 August 1974 through 16 August 1974, to determine RCS jet interaction effects on hypersonic aerodynamic characteristics and to investigate RT (gas constant times temperature) scaling effects on the RCS similitude. The model was an 0.010-scale replica of the Space Shuttle Orbiter Configuration 3. Hypersonic aerodynamic data were obtained from tests at Mach 10.3 and dynamic pressures of 200, 150, 125, and 100 psf. RCS modes of pitch, yaw, and roll at free flight dynamic pressure simulation of 20 psf were investigated.

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- (A) CLM, CYN, CBL, CN, CY, CA, DLTCLM, DLTCYN, DLTCBL, DLTCN, DLTCY, DLTCA versus ALPHA
- (B) CLM, CYN, CBL, CN, CY, CA, DLTCLM, DLTCYN, DLTCBL, DLTCN, DLTCY, DLTCA versus BETA
- (C) CLM, CYN, CBL, CN, CY, CA, N(PM), DLTCLM, N(YM), DLTCYN, N(RM), DLTCBL, N(NF), DLTCN, N(SF), DLTCY versus ALPHA
- (D) CLM, CYN, CBL, CN, CY, CA, N(PM), DLTCLM, N(YM), DLTCYN, N(RM), DLTCBL, N(NF), DLTCN, N(SF), DLTCY versus BETA

NOMENCLATURE
General

| <u>SYMBOL</u> | <u>SADSAC SYMBOL</u> | <u>DEFINITION</u> |
|----------------|--------------------------|--|
| a | | speed of sound; m/sec, ft/sec |
| C _p | CP | pressure coefficient; $(p_1 - p_\infty)/q$ |
| M | MACH | Mach number; V/a |
| p | | pressure; N/m ² , psf |
| q | Q(NSM) Q(PSF) | dynamic pressure; $1/2\rho V^2$, N/m ² , psf |
| RN/L | RN/L | unit Reynolds number; per m, per ft |
| V | | velocity; m/sec, ft/sec |
| α | ALPHA | angle of attack, degrees |
| β | BETA | angle of sideslip, degrees |
| ψ | PSI | angle of yaw, degrees |
| ϕ | PHI | angle of roll, degrees |
| ρ | | mass density; kg/m ³ , slugs/ft ³ |

Reference & C.G. Definitions

| | | |
|------------------------------|------|---|
| A _b | | base area; m ² , ft ² |
| b | BREF | wing span or reference span; m, ft |
| c.g. | | center of gravity |
| $\frac{l}{c}$ _{REF} | LREF | reference length or wing mean aerodynamic chord; m, ft |
| S | SREF | wing area or reference area; m ² , ft ² |
| | MRP | moment reference point |
| | XMRP | moment reference point on X axis |
| | YMRP | moment reference point on Y axis |
| | ZMRP | moment reference point on Z axis |

SUBSCRIPTS

| | |
|----------|-------------------|
| b | base |
| l | local |
| s | static conditions |
| t | total conditions |
| ∞ | free stream |

NOMENCLATURE (Continued)

Body-Axis System

| <u>SYMBOL</u> | <u>SADSAC SYMBOL</u> | <u>DEFINITION</u> |
|---------------|--------------------------|---|
| C_N | CN | normal-force coefficient; $\frac{\text{normal force}}{qS}$ |
| C_A | CA | axial-force coefficient; $\frac{\text{axial force}}{qS}$ |
| C_Y | CY | side-force coefficient; $\frac{\text{side force}}{qS}$ |
| C_{A_b} | CAB | base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$ |
| C_{A_f} | CAF | forebody axial force coefficient, $C_A - C_{A_b}$ |
| C_m | CLM | pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$ |
| C_n | CYN | yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$ |
| C_l | CBL | rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$ |

Stability-Axis System

| | | |
|-----------|------|--|
| C_L | CL | lift coefficient; $\frac{\text{lift}}{qS}$ |
| C_D | CD | drag coefficient; $\frac{\text{drag}}{qS}$ |
| C_{D_b} | CDB | base-drag coefficient; $\frac{\text{base drag}}{qS}$ |
| C_{D_f} | CDF | forebody drag coefficient; $C_D - C_{D_b}$ |
| C_Y | CY | side-force coefficient; $\frac{\text{side force}}{qS}$ |
| C_m | CIM | pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$ |
| C_n | CLN | yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$ |
| C_l | CSL | rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$ |
| L/D | L/D | lift-to-drag ratio; C_L/C_D |
| L/D_f | L/DF | lift to forebody drag ratio; C_L/C_{D_f} |

NOMENCLATURE (Continued)

| <u>Symbol</u> | <u>SADSAC Symbol</u> | <u>Definition</u> |
|---------------|--------------------------|---|
| A_e | | nozzle exit area, in ² |
| C_{ℓ_j} | | RCS jet rolling moment coefficient, $(T\ell_{\ell})/(qSb)$ |
| C_{m_j} | | RCS jet pitching moment coefficient, $(T\ell_m)/(qS\bar{c})$ |
| C_{n_j} | | RCS jet yawing moment coefficient, $(T\ell_n)/(qSb)$ |
| C_{N_j} | | RCS jet normal force coefficient, $(T)/(qS)$ |
| C_{Y_j} | | RCS jet side force coefficient, $(T)/(qS)$ |
| e | | nozzle expansion ratio |
| h | | altitude, feet |
| k_i | | model nozzle thrust calibration factor, lbs/psia |
| ℓ_{ℓ} | | RCS nozzle rolling moment arm, in |
| ℓ_m | | RCS nozzle pitching moment arm, in |
| ℓ_n | | RCS nozzle yawing moment arm, in |
| ℓ_{orb} | | Orbiter body length, in |
| LH | | left hand side |
| m_j | | RCS jet mass flow rate, lbm/sec |
| M_j | | RCS jet exit Mach number |
| N_{ℓ} | N(RM) | RCS roll jet amplification factor, $(\Delta C_{\ell})/(C_{\ell_j})$ |
| N_m | / N(PM) | RCS pitch jet amplification factor, $(\Delta C_m)/(C_{m_j})$ |

NOMENCLATURE (Continued)

| | | |
|-----------------|---------|---|
| N_n | $N(YM)$ | RCS yaw jet amplification factor, $(\Delta C_n)/(C_{n_j})$ |
| N_N | $N(NF)$ | RCS normal force jet amplification factor, $(\Delta C_N)/(C_{N_j})$ |
| N_Y | $N(SF)$ | RCS side force jet amplification factor, $(\Delta C_Y)/(C_{Y_j})$ |
| P_c | PCRCS | model RCS nozzle plenum chamber pressure, psia |
| P_j | | RCS jet exit pressure, psia |
| RCS | | reaction control system |
| RH | | right hand side |
| RT | | product of RCS nozzle gas constant and temperature, (ft-lb)/lb |
| T | | RCS thrust, lbs |
| T_c | TCRCS | RCS chamber temperature, °R |
| U | | velocity, ft/sec |
| U_j | | RCS jet velocity, ft/sec |
| X_o | | Orbiter longitudinal station, in |
| Y_o | | Orbiter lateral station, in |
| Z_o | | Orbiter vertical station, in |
| ΔC_ℓ | DLTCBL | incremental rolling moment coefficient due to RCS jet interaction |
| ΔC_m | DLTCLM | incremental pitching moment coefficient due to RCS jet interaction |
| ΔC_n | DLTCYN | incremental yawing moment coefficient due to RCS jet interaction |
| ΔC_N | DLTCN | incremental normal force coefficient due to RCS jet interaction |

NOMENCLATURE (Concluded)

| | | |
|--------------|--------|---|
| ΔC_Y | DLTCY | incremental side force coefficient due to RCS jet interaction |
| ΔC_A | DLTCA | incremental axial force coefficient due to RCS jet interaction |
| γ | | jet gas specific heat ratio |
| $\sum k_i$ | | sum of model nozzle thrust calibration factors for all nozzles installed on model during a given test run, lbs/psia |
| θ | | RCS nozzle angle, deg. |
| T/qA | T/QA | RCS thrust divided by freestream dynamic pressure times unit area |
| $\%He$ | PCTHE | percent Helium in jet plume simulation |
| $\%A$ | PCTAR | percent Argon in jet plume simulation |

REMARKS

All RCS nozzles (with the exception of N80, which was the left hand down firing N49 inverted and mounted on the right hand side) were tested with cold air as the RCS flow medium at a tunnel freestream dynamic pressure of 150 psf. RCS nozzles N49, N52, and N85 were also tested using 100% Argon, 100% Helium, 90% Helium/10% Argon, and 85% Helium/15% Argon as the RCS flow medium. The Argon, Helium, and Helium/Argon mixtures were used to provide a wide range of injectant molecular weights to investigate the RT effects. Other percentage mixes of the Helium/Argon gasses were provided for the test, however, when no significant RT effect due to the molecular weight of the RCS gas was observed, the mixed gas portion of the proposed test program was discontinued.

CONFIGURATIONS INVESTIGATED

The only model components changed during this test were the non-metric RCS nozzle blocks. Four of the nozzle blocks have been used in preceding RCS tests OA85 and OA105. These nozzles are identified as N49, N50, N51, and N52. Seven new RCS nozzle blocks were fabricated and calibrated for this test and identified as N78, N79, N81, N82, N83, N84, and N85. Nozzle configurations are summarized in Table IV.

For one series of runs at various T/qA values, the left hand down firing nozzle, N49 was placed on the right hand side, making an up firing RCS nozzle. This configuration was identified as N80 and was tested during runs 80 through 84 (data set numbers 13 and 50 through 53).

For convenience the Orbiter configuration was abbreviated to the letter O, but in each case the complete configuration, not including the RCS nozzles was: $O = B_{19} C_7 E_{23} F_5 M_6 N_{39} R_5 V_7 W_{107}$ these symbols are defined in the Model Dimensional Data (Table III).

Simulation parameters are summarized in Table V.

INSTRUMENTATION

The LRC 0.75-inch six-component 2019A internal balance was used for this test program.

No model base or balance chamber pressures were measured during the test. The RCS supply pressure was set and monitored at the plenum chamber between the left hand and right hand RCS nozzle blocks.

TEST FACILITY DESCRIPTION

The Mach 10 nozzle of the Langley Continuous Flow Hypersonic Tunnel is designed to operate at stagnation pressures of 15 to 150 atmospheres at temperatures up to 1960° R. Air is preheated electrically by passing through a multi-tube heater. The nozzle has a 31-inch square test section which incorporates a moveable second minimum. Continuous operation is achieved by passing the air through a series of compressors. Additional information on this facility is given in NASA TM X-1130 entitled, "Characteristics of Major Active Wind Tunnels at the Langley Research Center", by William T. Schaefer, Jr.

DATA REDUCTION

Aerodynamic forces and moments were reduced to coefficient form using the following reference dimensions:

Reference Area:

$$\begin{aligned} S &= 0.269 \text{ ft}^2 (38.736 \text{ in}^2), \text{ model scale} \\ &= 2690.0 \text{ ft}^2, \text{ full scale} \end{aligned}$$

Reference Lengths:

$$\begin{aligned} \bar{c} &= 4.748 \text{ in. model scale} \\ &= 474.8 \text{ in. full scale} \\ b &= 9.367 \text{ in. model scale} \\ &= 936.7 \text{ in. full scale} \end{aligned}$$

The moments were reduced about a moment reference center located at:

$$\begin{aligned} \text{Orbiter station } 10.767 \text{ at } Y_0 &= 0.00 \text{ and } Z_0 = 3.75 \text{ model scale} \\ X_0 &= 1076.7, Y_0 = 0.0, \text{ and } Z_0 = 375.0 \text{ full scale} \end{aligned}$$

Standard LRC data reduction techniques were employed for reducing the data to coefficient form.

Reduced coefficient data were used to determine RCS jet interaction amplification factors. Incremental coefficient data (ΔC_m , ΔC_ℓ , ΔC_n , ΔC_y , and ΔC_A) were computed to provide effects of RCS jets. Amplification factors were computed for each plane of action:

$$N_m = \frac{\Delta C_m}{C_{m_j}} = \frac{\frac{\Delta C_m}{(T \ell_m)}}{\frac{q S \bar{c}}{P_{C \ell_m} \Sigma k_i}} = \frac{q S \bar{c}}{P_{C \ell_m} \Sigma k_i} \Delta C_m$$

$$N_\ell = \frac{\Delta C_\ell}{C_{\ell_j}} = \frac{\frac{\Delta C_\ell}{(T \ell_\ell)}}{\frac{q S b}{P_{C \ell_\ell} \Sigma k_i}} = \frac{q S b}{P_{C \ell_\ell} \Sigma k_i} \Delta C_\ell$$

DATA REDUCTION (Continued)

$$N_n = \frac{\Delta C_n}{C_{n_j}} = \frac{\Delta C_n}{\left(\frac{T \ell_n}{qSb}\right)} = \frac{qSb}{P_c \ell_n \sum k_i} \Delta C_n$$

$$N_N = \frac{\Delta C_N}{C_{N_j}} = \frac{\Delta C_N}{\left(\frac{T}{qS}\right)} = \frac{qS}{P_c \sum k_i} \Delta C_N$$

$$N_Y = \frac{\Delta C_Y}{C_{Y_j}} = \frac{\Delta C_Y}{\left(\frac{T}{qS}\right)} = \frac{qS}{P_c \sum k_i} \Delta C_Y$$

$$N_A = \frac{\Delta C_A}{C_{A_j}} = \frac{\Delta C_A}{\left(\frac{T}{qS}\right)} = \frac{qS}{P_c \sum k_i} \Delta C_A$$

where:

ℓ_m = RCS pitch jet moment arm
= 4.523 in model scale

ℓ_ℓ = RCS roll jet moment arm
= 1.110 in model scale

ℓ_n = RCS yaw jet moment arm
= 4.588 in model scale

$\sum k_i$ = sum of k_i 's for all nozzles firing in the same thrust plane, k_i given in Table VI

S, \bar{c}, b = as given above

The resulting factors (N's) represent amplification of Orbiter aerodynamic forces caused by RCS jet interaction's with the Orbiter flow field. They are normalized by RCS jet thrusts to allow easy use in control analysis. The incremental coefficient data do not include thrust forces since the model nozzles were non-metric. Increments and amplification factors were

DATA REDUCTION (Concluded)

computed for each force and moment plane using data from each nozzle that was tested. This provides both direct (e.g. ΔC_m due to pitch jet) and cross-coupling (e. g. ΔC_m due to yaw jet) effects. Resulting data are presented in the data figures.

REFERENCES

1. SD74-SH-0188, "Pretest Information for Tests of the 0.010-Scale Space Shuttle Vehicle (Model 32-0) in the NASA/LRC 31-inch CFHT to Investigate RT Effects (OA82)", by D. E. Thornton, 10 June 1974.
2. DMS-DR-2137 (NASA CR-134, 103) "Results of Tests in the NASA/LaRC 31-inch CFHT on an 0.010-Scale Model (32-0T) of the Space Shuttle Configuration 3 To Determine the RCS Jet Flow Field Interaction Effects on Aerodynamic Characteristics (IA60/OA105)" by D. E. Thornton, August 1974.

TABLE I.

[illegible]

TABLE II.

[illegible]

TABLE II. (CONT'D)

| TEST: $\phi A 82$ | | | DATA SET/RUN NUMBER COLLATION SUMMARY | | | | | | | | | | DATE: 8/19/74 | | | | | |
|--|------------------|----------|---------------------------------------|-------------------|-------|--|--|-------|--------|--|--|--|---------------|-------------|--------------|--|--|--|
| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | MACH NUMBERS | | | |
| | | α | β | q | P_c | | | T_c | $T/4A$ | | | | | | 10.3 | | | |
| RH/ $\phi 00$ | $\phi N 49$ | 0 | B | 150 | 155 | | | 68 | 47.5 | | | | | 5 | | | | |
| 01 | $\phi N 49$ | A | 0 | | 155 | | | | | | | | | 6 | | | | |
| 02 | $\phi N 49 N 50$ | 0 | B | | 164 | | | | | | | | | 7 | | | | |
| 03 | $\phi N 49 N 50$ | A | 0 | | 164 | | | | | | | | | 8 | | | | |
| 04 | $\phi N 49 N 52$ | 0 | B | | 155 | | | | | | | | | 9 | | | | |
| 05 | $\phi N 49 N 52$ | A | 0 | | 155 | | | | | | | | | 10 | | | | |
| 06 | $\phi N 81 N 52$ | 0 | B | | 157 | | | | | | | | | 11 | | | | |
| 07 | $\phi N 81 N 52$ | A | 0 | | 157 | | | | | | | | | 12 | | | | |
| 08 | $\phi N 52$ | 0 | B | | 155 | | | | | | | | | 13 | | | | |
| 09 | $\phi N 52$ | A | 0 | | 155 | | | 70 | | | | | | 14 | | | | |
| 10 | $\phi N 85$ | 0 | B | | 158 | | | | | | | | | 15 | | | | |
| 11 | $\phi N 85$ | A | 0 | | 158 | | | | | | | | | 16 | | | | |
| 12 | $\phi N 84$ | 0 | B | | 161 | | | | | | | | | 17 | | | | |
| 13 | $\phi N 84$ | A | 0 | | 161 | | | | | | | | | 18 | | | | |
| 14 | $\phi N 79$ | | | | 155 | | | 76 | | | | | | 21 | | | | |
| 15 | $\phi N 51$ | | | | 176 | | | 70 | | | | | | 22 | | | | |
| 16 | $\phi N 83$ | | | | 158 | | | | | | | | | 23 | | | | |
| 17 | $\phi N 82$ | | | Y | 158 | | | | | | | | | 24 | | | | |
| 1 7 13 19 25 31 37 43 49 55 61 67 73 76 | | | | | | | | | | | | | | | | | | |
| COEFFICIENTS 10VAR 11 10VAR 12 NDV | | | | | | | | | | | | | | | | | | |
| α OR β _____ | | | | | | | | | | | | | | | | | | |
| SCHEDULES _____ | | | | | | | | | | | | | | | | | | |

TEST RUN NUMBERS

TABLE II. (CONT'D)

| TEST: $\phi A 82$ | | DATA SET/RUN NUMBER COLLATION SUMMARY | | | | | | | | | | DATE: 8/19/74 | | | | |
|--|---------------|---------------------------------------|---------|-------------------|-------|--|--|-------|--------|--|--|---------------|--------------|--|--|--|
| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | NO. OF RUNS | MACH NUMBERS | | | |
| | | α | β | q | P_c | | | T_c | T/qA | | | | 10.3 | | | |
| RHL $\phi 18$ | $\phi N 78$ | A | O | 150 | 159 | | | 73 | 47.5 | | | | 25 | | | |
| 19 | $\phi N 85$ | | | | 158 | | | | | | | | 26 | | | |
| 20 | $\phi N 85$ | | | | 158 | | | | | | | | 28 | | | |
| 21 | $\phi N 52$ | | | | 155 | | | | | | | | 29 | | | |
| 22 | $\phi N 49$ | | | | 155 | | | 69 | | | | | 30 | | | |
| 23 | $\phi N 49$ | | | 125 | 129 | | | 72 | | | | | 32 | | | |
| 24 | $\phi N 85$ | | | | 131 | | | | | | | | 33 | | | |
| 25 | $\phi N 52$ | | | | 129 | | | | | | | | 34 | | | |
| 26 | $\phi N 52$ | | | 100 | 103 | | | | | | | | 36 | | | |
| 27 | $\phi N 85$ | | | | 105 | | | | | | | | 37 | | | |
| 28 | $\phi N 49$ | | | | 103 | | | | | | | | 38 | | | |
| 29 | $\phi N 49$ | | | 75 | 78 | | | | | | | | 40 | | | |
| 30 | $\phi N 49$ | | | 200 | 83 | | | | 19 | | | | 44 | | | |
| 31 | $\phi N 49$ | | | | 261 | | | 75 | 60 | | | | 45 | | | |
| 32 | $\phi N 49$ | | | | 478 | | | 78 | 110 | | | | 46 | | | |
| 33 | $\phi N 49$ | | | | 695 | | | 80 | 160 | | | | 47 | | | |
| 34 | $\phi N 52$ | | | | 83 | | | | 19 | | | | 48 | | | |
| 35 | $\phi N 52$ | | | | 261 | | | | 60 | | | | 49 | | | |
| 1 7 13 19 25 31 37 43 49 55 61 67 73 76 | | | | | | | | | | | | | | | | |
| COEFFICIENTS IDVAR (1) IDVAR (2) NDV | | | | | | | | | | | | | | | | |
| α OR β SCHEDULES | | | | | | | | | | | | | | | | |

TEST RUN NUMBERS

TABLE II. (CONT'D)

| TEST: $\Phi A 82$ | | | DATA SET/RUN NUMBER COLLATION SUMMARY | | | | | | | | | | DATE: 8/19/74 | | | |
|---|---------------|----------|---------------------------------------|-------------------|-------|--|-------|--------|--|--|--|-------------|---------------|--|--|--|
| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | NO. OF RUNS | MACH NUMBERS | | | |
| | | α | β | q | P_c | | T_c | T/qA | | | | | 10.3 | | | |
| RHL $\Phi 36$ | $\Phi N 52$ | A | O | 200 | 478 | | 81 | 110 | | | | | 50 | | | |
| 37 | $\Phi N 52$ | | | 200 | 645 | | 87 | 160 | | | | | 51 | | | |
| 38 | $\Phi N 52$ | | | 125 | 78 | | 82 | 28.5 | | | | | 53 | | | |
| 39 | $\Phi N 52$ | | | | 48 | | 82 | 36 | | | | | 54 | | | |
| 40 | $\Phi N 52$ | | | | 261 | | 79 | 96 | | | | | 55 | | | |
| 41 | $\Phi N 52$ | | | | 473 | | 83 | 174 | | | | | 56 | | | |
| 42 | $\Phi N 52$ | | | | 702 | | 88 | 258 | | | | | 57 | | | |
| 43 | $\Phi N 85$ | | | | 79 | | 83 | 28.5 | | | | | 58 | | | |
| 44 | $\Phi N 49$ | | | | 78 | | | 28.5 | | | | | 59 | | | |
| 45 | $\Phi N 49$ | | | | 98 | | | 36 | | | | | 60 | | | |
| 46 | $\Phi N 49$ | | | | 261 | | | 96 | | | | | 61 | | | |
| 47 | $\Phi N 49$ | | | | 473 | | | 174 | | | | | 62 | | | |
| 48 | $\Phi N 49$ | | | | 702 | | 89 | 258 | | | | | 63 | | | |
| 49 | $\Phi N 49$ | | | | 129 | | 85 | 47.5 | | | | | 64 | | | |
| 50 | $\Phi N 80$ | | | | 98 | | 86 | 36 | | | | | 81 | | | |
| 51 | $\Phi N 80$ | | | | 261 | | 80 | 96 | | | | | 82 | | | |
| 52 | $\Phi N 80$ | | | | 473 | | 83 | 174 | | | | | 83 | | | |
| 53 | $\Phi N 80$ | | | | 702 | | 86 | 258 | | | | | 84 | | | |
| <div> <div>7131925313743495561677576</div> <div>COEFFICIENTS</div> <div>ICLAR (1) ICLAR (2) NOCV</div> </div> | | | | | | | | | | | | | | | | |
| <div> <div>α OR β</div> <div>SCHEDULES</div> </div> | | | | | | | | | | | | | | | | |

TEST RUN NUMBERS

TABLE II. (CONT'D)

[illegible]

TABLE II. (CONCLUDED)

[illegible]

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT : BODY - B19

GENERAL DESCRIPTION : Fuselage, Configuration 3, per Rockwell

Lines VL70-000139B

NOTE: Identical to B17 except forebody.

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000139B

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|----------------------|----------------|----------------|
| Length , In. | <u>1290.3</u> | <u>12.903</u> |
| Max Width, In. | <u>267.6</u> | <u>2.676</u> |
| Max Depth , In. | <u>244.5</u> | <u>2.445</u> |
| Fineness Ratio | <u>4.82175</u> | <u>4.82175</u> |
| Area- Ft_2 | <u></u> | <u></u> |
| Max. Cross-Sectional | <u>386.67</u> | <u>0.0387</u> |
| Planform | <u></u> | <u></u> |
| Wetted | <u></u> | <u></u> |
| Base | <u></u> | <u></u> |

TABLE III (CONT'D)

MODEL COMPONENT : CANOPY - C₇

GENERAL DESCRIPTION : Configuration 3 per Rockwell Lines VL70-000139

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000139

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|--|--------------|--------------|
| Length ($X_o=433$ to $X_o=578$), In. | <u>145.0</u> | <u>1.450</u> |
| Max Width | _____ | _____ |
| Max Depth | _____ | _____ |
| Fineness Ratio | _____ | _____ |
| Area | _____ | _____ |
| Max. Cross-Sectional | _____ | _____ |
| Planform | _____ | _____ |
| Wetted | _____ | _____ |
| Base | _____ | _____ |

TABLE III (CONT'D)

MODEL COMPONENT: ELEVON - E₂₃GENERAL DESCRIPTION: Configuration 3 per W₁₀₇ Rockwell Lines DrawingVL70-000139B. Data for (1) of (2) sides.MODEL SCALE: 0.010DRAWING NUMBER: VL70-000139BDIMENSIONS:

| | <u>FULL-SCALE</u> | <u>MODEL SCALE</u> |
|---|-------------------|--------------------|
| Area - Ft ² | <u>205.52</u> | <u>0.0206</u> |
| Span (equivalent), In. | <u>353.34</u> | <u>3.533</u> |
| Inb'd equivalent chord, In. | <u>114.78</u> | <u>1.148</u> |
| Outb'd equivalent chord, In. | <u>55.00</u> | <u>0.550</u> |
| Ratio movable surface chord/ total surface chord | | |
| At Inb'd equiv. chord | <u>0.208</u> | <u>0.208</u> |
| At Outb'd equiv. chord | <u>0.400</u> | <u>0.400</u> |
| Sweep Back Angles, degrees | | |
| Leading Edge | <u>0.00</u> | <u>0.00</u> |
| Tailing Edge | <u>- 10.24</u> | <u>-10.24</u> |
| Hingeline | <u>0.00</u> | <u>0.00</u> |
| Area Moment (Normal to hinge line) - Ft ³ (Product of Area and c) | <u>1548.07</u> | <u>0.00155</u> |

TABLE III (CONT'D)

MODEL COMPONENT : BODY FLAP - F₅GENERAL DESCRIPTION : Configuration 3 per Rockwell Lines VL70-000139.MODEL SCALE: 0.010DRAWING NUMBER : VL70-000139

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|------------------------|-------------------|-------------------|
| Length, In. | <u>84.70</u> | <u>0.847</u> |
| Max Width, In. | <u>267.6</u> | <u>2.676</u> |
| Max Depth | <u> </u> | <u> </u> |
| Fineness Ratio | <u> </u> | <u> </u> |
| Area - Ft ³ | <u> </u> | <u> </u> |
| Max. Cross-Sectional | <u> </u> | <u> </u> |
| Planform | <u>142.5</u> | <u>0.0143</u> |
| Wetted | <u> </u> | <u> </u> |
| Base | <u>38.0958</u> | <u>0.0038</u> |

TABLE III (CONT'D)

MODEL COMPONENT : OMS POD - M₆GENERAL DESCRIPTION : Basic configuration 3A OMS pods with non-
metric RCS engine housing and nozzles. Same geometry as M₄.MODEL SCALE: 0.010DRAWING NUMBER : VL70-000139B

| DIMENSIONS : | FULL SCALE | MODEL SCALE |
|---|-------------------|-------------------|
| Length | <u>346.0</u> | <u>3.460</u> |
| Max Width | <u>108.0</u> | <u>1.080</u> |
| Max Depth | <u>113.0</u> | <u>1.130</u> |
| Fineness Ratio | <u> </u> | <u> </u> |
| Area | <u> </u> | <u> </u> |
| Max. Cross-Sectional | <u> </u> | <u> </u> |
| Planform | <u> </u> | <u> </u> |
| Wetted | <u> </u> | <u> </u> |
| Base | <u> </u> | <u> </u> |
| Station of aft end of RCS nozzle block | 1560 | 15.60 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N₄₉

GENERAL DESCRIPTION: RCS Nozzle providing left-hand pitch-down control
to simulate return to launch site (RTLS)

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160-19

DIMENSIONS:

MODEL SCALE

| | |
|--|----------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant Angle - deg. | |
| Aft | 12 |
| Outboard | 20 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area Ratio | 4.430 |
| No. of nozzles | 2 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N₅₀

GENERAL DESCRIPTION: RCS nozzle providing righthand pitch-down control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160-20

DIMENSIONS:

MODEL SCALE

| | |
|--|----------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| Aft | 12 |
| Outboard | 20 |
| Diameter - In. | 0.141 |
| Exit | 0.151 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 2 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N₅₁

GENERAL DESCRIPTION: RCS nozzle providing left-hand yaw control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160-11

DIMENSIONS:

| | <u>MODEL SCALE</u> |
|--|--------------------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - Deg. | |
| Aft | 0 |
| Outboard | 0 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 4 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N₅₂

GENERAL DESCRIPTION: RCS nozzle providing right-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160-12

DIMENSIONS:

MODEL SCALE

| | |
|--|----------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| Aft | 0 |
| Outboard | 0 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 2 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N₇₈

GENERAL DESCRIPTION: RCS nozzle providing right-hand up-firing control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160

DIMENSIONS:

MODEL SCALE:

| | |
|--|----------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| Aft | 0 |
| Outboard | 0 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 1 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N79

GENERAL DESCRIPTION: RCS nozzle providing left-hand pitch-down control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

DIMENSIONS:

MODEL SCALE

| | |
|--|----------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| Aft | 12 |
| Outboard | 20 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015615 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 1 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N₈₀

GENERAL DESCRIPTION: RCS nozzle providing right-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

| DIMENSIONS: | <u>MODEL SCALE</u> |
|--|--------------------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| Fwd | 12 |
| Outboard | 20 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 2 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N81

GENERAL DESCRIPTION: RCS nozzle providing left-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

DIMENSIONS:

| | <u>MODEL SCALE</u> |
|--|--------------------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - Deg. | |
| Aft | 0 |
| Outboard | 0 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| .Area ratio | 4.430 |
| No. of nozzles | 2 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N82

MODEL DESCRIPTION: RCS nozzle providing right-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

| DIMENSIONS: | <u>MODEL SCALE</u> |
|--|--------------------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| .Aft | 0 |
| Outboard | 0 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 3 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N₈₃

GENERAL DESCRIPTION: RCS nozzle providing left-hand pitch-down control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

DIMENSIONS:

| | <u>MODEL SCALE</u> |
|--|--------------------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| Aft | 12 |
| Outboard | 20 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 3 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N84

GENERAL DESCRIPTION: RCS nozzle providing right-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.:

DIMENSIONS:

| | <u>MODEL SCALE.</u> |
|--|---------------------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| Aft | 0 |
| Outboard | 0 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 2 |

TABLE III (CONT'D)

MODEL COMPONENT: NOZZLE - N85

GENERAL DESCRIPTION: RCS nozzle providing left-hand side-firing
to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DIMENSIONS:

MODEL SCALE

| | |
|--|----------|
| Flight dynamic pressure simulation - PSF | 20 |
| Cant angle - deg. | |
| Aft | 0 |
| Outboard | 0 |
| Diameter - In. | |
| Exit | 0.141 |
| Throat | 0.0670 |
| Area - In. ² | |
| Exit | 0.015614 |
| Throat | 0.003525 |
| Area ratio | 4.430 |
| No. of nozzles | 2 |

TABLE III (CONT'D)

MODEL COMPONENT: MPS NOZZLES - N₃₉GENERAL DESCRIPTION: Configuration 3A MPS nozzles.MODEL SCALE: 0.010

DRAWING NUMBER: _____

DIMENSIONS: FULL SCALE MODEL SCALE

MACH NO.

Length - In.

Gimbal Point to Exit Plane

Throat to Exit Plane

Diameter - In.

Exit

Throat

Inlet

Area - ft²

Exit

Throat

Gimbal Point (Station) - In.

Upper Nozzle

X

Y

Z

NOT USED

Lower Nozzles

X

Y

Z

Null Position - Deg.

Upper Nozzle

Pitch

Yaw

NOT USED

Lower Nozzle

Pitch

Yaw

TABLE III (CONT'D)

MODEL COMPONENT: RUDDER - R₅GENERAL DESCRIPTION: Configuration 140C orbiter rudder (identical to configuration 140A/B rudder)MODEL SCALE: 0.010DRAWING NUMBER: VL70-000146B, -000095DIMENSIONS:

| | <u>FULL-SCALE</u> | <u>MODEL SCALE</u> |
|---|-------------------|--------------------|
| Area - Ft ² | <u>100.15</u> | <u>0.0100</u> |
| Span (equivalent), In. | <u>201.00</u> | <u>2.010</u> |
| Inb'd equivalent chord, In. | <u>91.585</u> | <u>0.916</u> |
| Outb'd equivalent chord, In. | <u>50.833</u> | <u>0.508</u> |
| Ratio movable surface chord/ total surface chord | | |
| At Inb'd equiv. chord | <u>0.400</u> | <u>0.400</u> |
| At Outb'd equiv. chord | <u>0.400</u> | <u>0.400</u> |
| Sweep Back Angles, degrees | | |
| Leading Edge | <u> </u> | <u> </u> |
| Tailing Edge | <u>26.25</u> | <u>26.25</u> |
| Hingeline | <u>34.83</u> | <u>34.83</u> |
| (Product of Area & \bar{c}) | | |
| Area Moment (Normal to hinge line) Ft ³ | <u>610.92</u> | <u>0.000610</u> |
| Mean Aerodynamic Chord, In. | <u>73.2</u> | <u>0.732</u> |

TABLE III (CONT'D)

MODEL COMPONENT: VERTICAL - V₇GENERAL DESCRIPTION: Centerline vertical tail, doublewedge airfoil
with rounded leading edge.NOTE: Same as V₅, but with manipulator housing removed.MODEL SCALE: 0.010DRAWING NUMBER: VL70-000139

| DIMENSIONS: | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|-------------------------------|-------------------|--------------------|
| TOTAL DATA | | |
| Area (Theo) - Ft ² | | |
| Planform | <u>425.92</u> | <u>0.0426</u> |
| Span (Theo) - In. | <u>315.72</u> | <u>3.157</u> |
| Aspect Ratio | <u>1.675</u> | <u>1.675</u> |
| Rate of Taper | <u>0.507</u> | <u>0.507</u> |
| Taper Ratio | <u>0.404</u> | <u>0.404</u> |
| Sweep-Back Angles, Degrees. | | |
| Leading Edge | <u>45.00</u> | <u>45.000</u> |
| Trailing Edge | <u>26.249</u> | <u>26.249</u> |
| 0.25 Element Line | <u>41.130</u> | <u>41.130</u> |
| Chords: | | |
| Root (Theo) WP | <u>268.50</u> | <u>2.685</u> |
| Tip (Theo) WP | <u>108.47</u> | <u>1.085</u> |
| MAC | <u>199.81</u> | <u>1.998</u> |
| Fus. Sta. of .25 MAC | <u>1463.50</u> | <u>14.635</u> |
| W.P. of .25 MAC | <u>635.522</u> | <u>6.355</u> |
| B.L. of .25 MAC | <u>0.00</u> | <u>0.00</u> |
| Airfoil Section | | |
| Leading Wedge Angle - Deg. | <u>10.00</u> | <u>10.00</u> |
| Trailing Wedge Angle - Deg. | <u>14.920</u> | <u>14.920</u> |
| Leading Edge Radius | <u>2.0</u> | <u>0.020</u> |
| Void Area | <u>13.17</u> | <u>0.0013</u> |
| Blanketed Area | <u>0.00</u> | <u>0.00</u> |

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OF POOR QUALITY

*REV. 11/9/74

TABLE III. - MODEL DIMENSIONAL DATA - Concluded.

MODEL COMPONENT: WING-W₁₀₇

GENERAL DESCRIPTION: Configuration 3 per Rockwell Lines VL70-000139B

NOTE: Same as W₁₀₇ except cuff, airfoil and incidence angle.

TEST NO.

DWG. NO. VL70-000139B

DIMENSIONS:

FULL-SCALE

MODEL SCALE

TOTAL DATA

Area (Theo.) Ft^2

Planform

2690.00

Span (Theo) In.

936.68

Aspect Ratio

2.265

2.265

Rate of Taper

1.177

1.177

Taper Ratio

0.200

0.200

Dihedral Angle, degrees

3.500

3.500

Incidence Angle, degrees

0.500

0.500

Aerodynamic Twist, degrees

+3.000

+ 3.000

Sweep Back Angles, degrees

Leading Edge

45.000

45.000

Trailing Edge

- 10.24

-10.24

0.25 Element Line

35.209

35.209

Chords:

Root (Theo) B.P.O.O.

689.24

Tip, (Theo) B.P.

137.85

MAC

474.81

Fus. Sta. of .25 MAC

1136.89

(Z₀)* W.P. of .25 MAC

290.857

(Y₀)* B.L. of .25 MAC

182.13

EXPOSED DATA

Area (Theo) Ft^2

1752.29

Span, (Theo) In. BP108

720.68

Aspect Ratio

2.058

2.058

Taper Ratio

0.245

0.245

Chords

Root BP108

562.40

Tip 1.00 $\frac{b}{2}$

137.85

MAC

393.03

Fus. Sta. of .25 MAC

1185.31

*W.P. of .25 MAC

293.653

B.L. of .25 MAC

251.76

Airfoil Section (Rockwell Mod NASA)

XXXX-64

Root $\frac{b}{2}$ =

0.100

0.100

Tip $\frac{b}{2}$ =

0.120

0.120

Data for (1) of (2) Sides

Leading Edge Cuff

Planform Area Ft^2

118.333

Leading Edge Intersects Fus M. L. @ Sta

500.00

Leading Edge Intersects Wing @ Sta

1083.4

ORIGINAL PAGE IS
OF POOR QUALITY

TABLE IV. - SUMMARY OF NOZZLE NOMENCLATURE

| Nozzle | Throat Dia. | Exit Dia. | Lip Angle | Type | No. of Jets | Cant |
|--------|----------------|--------------|--------------|--|----------------|----------------------|
| N49 | 0.0670 | 0.1413 | 34°15' | LH down firing | 2 | 20°OUTB'D, 12°AFT |
| N50 | | | | RH down firing | 2 | 20°OUTB'D, 12°AFT |
| N51 | | | | LH side firing | 4 | None |
| N52 | | | | RH up firing | 2 | None |
| N78 | | | | RH up firing | 1 | None |
| N79 | | | | LH down firing | 1 | 20°OUTB'D, 12°AFT |
| N80 | | | | RH up firing (This nozzle is N49, mounted on RH side) | 2 | 20°OUTB'D, 12°FWD |
| N81 | | | | LH up firing | 2 | None |
| N82 | | | | RH up firing | 3 | None |
| N83 | | | | LH down firing | 3 | 20°OUTB'D 12°AFT |
| N84 | | | | Combination-RH up firing & side firing | 2 up 2 side | None |
| N85 | | | | LH side firing | 2 | None |

TABLE V. - SIMULATION PARAMETERS

$q_{\infty} = 20$ PSF RTLS abort separation simulation

| A. <u>Free Stream Conditions</u> | | <u>Free Flight</u> | <u>Wind Tunnel</u> |
|---|------------------------------------|-------------------------------|-------------------------|
| Dynamic Pressure | q | 20 psf | 150 psf |
| Mach number | M | 7 | 10.3 |
| *Reynolds No. | RN/L | 1.23×10^6 | 1×10^6 |
| Altitude | h | 200,000ft | -- |
| B. <u>RCS Jet Characteristics</u> | | <u>Prototype</u> | <u>Model</u> |
| Chamber Pressure | P_c | 150 psia | 140 psi |
| Chamber Temp. | T_c | 5450 °R | 520 °R |
| Specific Heat Ratio | γ | 1.232 | 1.4 |
| Expansion Ratio | e | 20 | 4.792 |
| Nozzle Angle | θ | 9° | 34°15' |
| Exit Area | A_e | 72.382 in ² | 0.01567 in ² |
| Exit Mach No. | M_e | 3.93 | 3.13 |
| Exit Pressure | P_j | 0.643 psi | 3.136 psi |
| Mass Flow Rate | \dot{m}_j | 3.287 lbm/sec | 0.01067 lbm/sec |
| Momentum | $\dot{M}_j U_j$ | 903.46 lbF | 0.675 lbs. |
| Thrust | T_j | 950 lbF | .712 lbs. |
| C. <u>Jet to Free Stream Parameters ($S_{ref} = 1 \text{ ft}^2$)</u> | | <u>Full Scale Free Flight</u> | <u>Simulation</u> |
| Thrust Ratio | $\frac{T}{q S_{ref}}$ | 47.5 | 47.5 (Matched) |
| Mass Flow Ratio | $\frac{\dot{m}_j}{\rho u S_{ref}}$ | 26.4 | 50.6 |
| Momentum Ratio | $\frac{\dot{M}_j U_j}{q S_{ref}}$ | 45.17 | 45 (Matched) |
| Pressure Ratio | $\frac{P_j}{P}$ | 224 | 224 (Matched) |
| Plume Shape | | Boundary up to Impact station | (Roughly Matched) |

* Reynolds Number based on Orbiter length $\ell_{orb} = 107.5 \text{ ft.}$

TABLE VI. - THRUST COEFFICIENT FACTORS

| <u>Jet</u> | <u>Gas</u> | $k_i = T/P_c$ <u>lbs/psia</u> |
|-----------------|-----------------|----------------------------------|
| N ₄₉ | Air | 0.00920 |
| N ₅₀ | | 0.00824 |
| N ₅₁ | | 0.01620 |
| N ₅₂ | | 0.00920 |
| N ₇₈ | | 0.00450 |
| N ₇₉ | | 0.00460 |
| N ₈₀ | | 0.00920 |
| N ₈₁ | | 0.00900 |
| N ₈₂ | | 0.01356 |
| N ₈₃ | | 0.01356 |
| N ₈₄ | | 0.00886 |
| N ₈₅ | | 0.00904 |
| N ₄₉ | He/Ar mixed gas | 0.00906 |
| N ₅₂ | | 0.00906 |
| N ₈₅ | | 0.00892 |

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

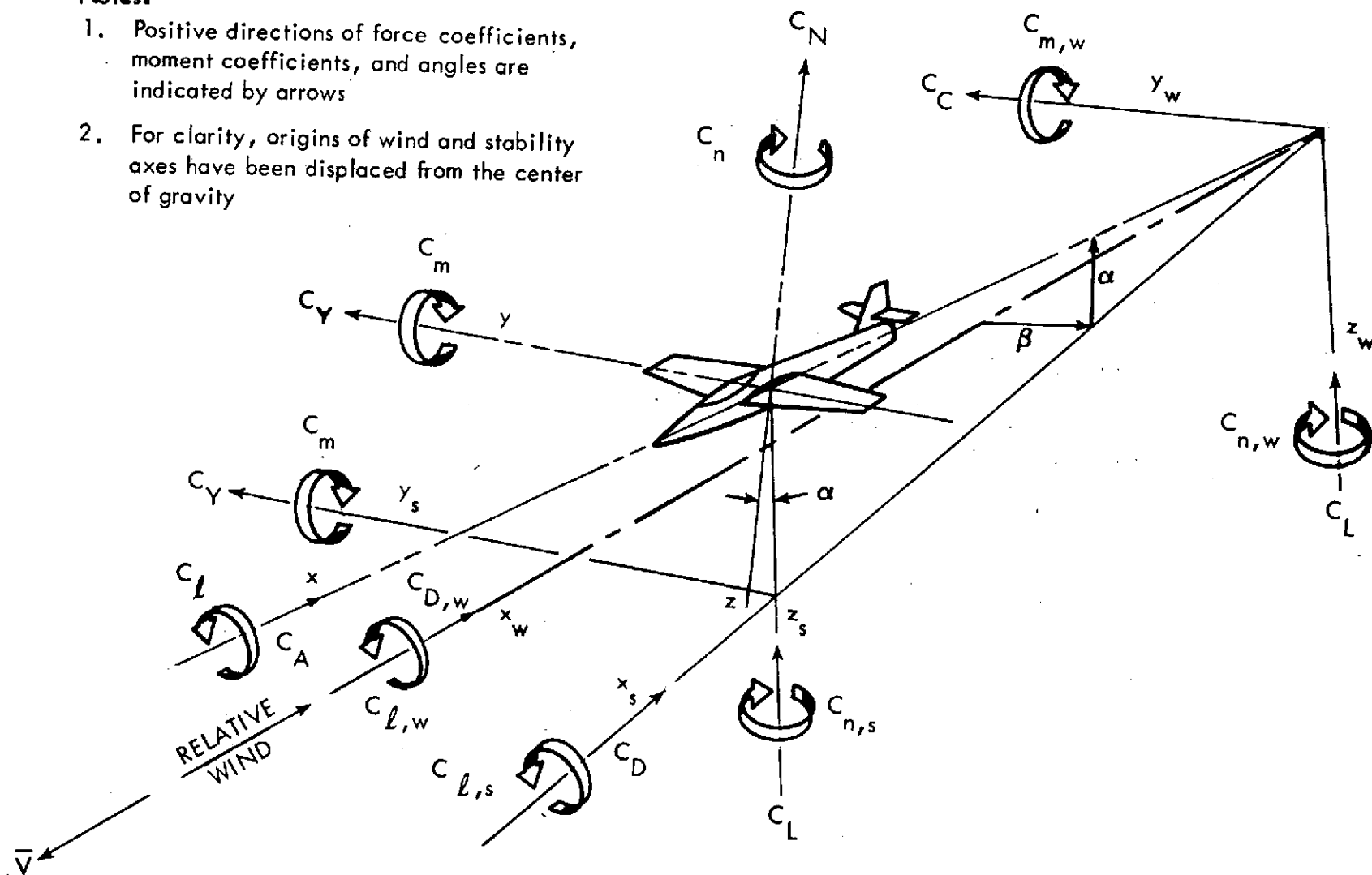
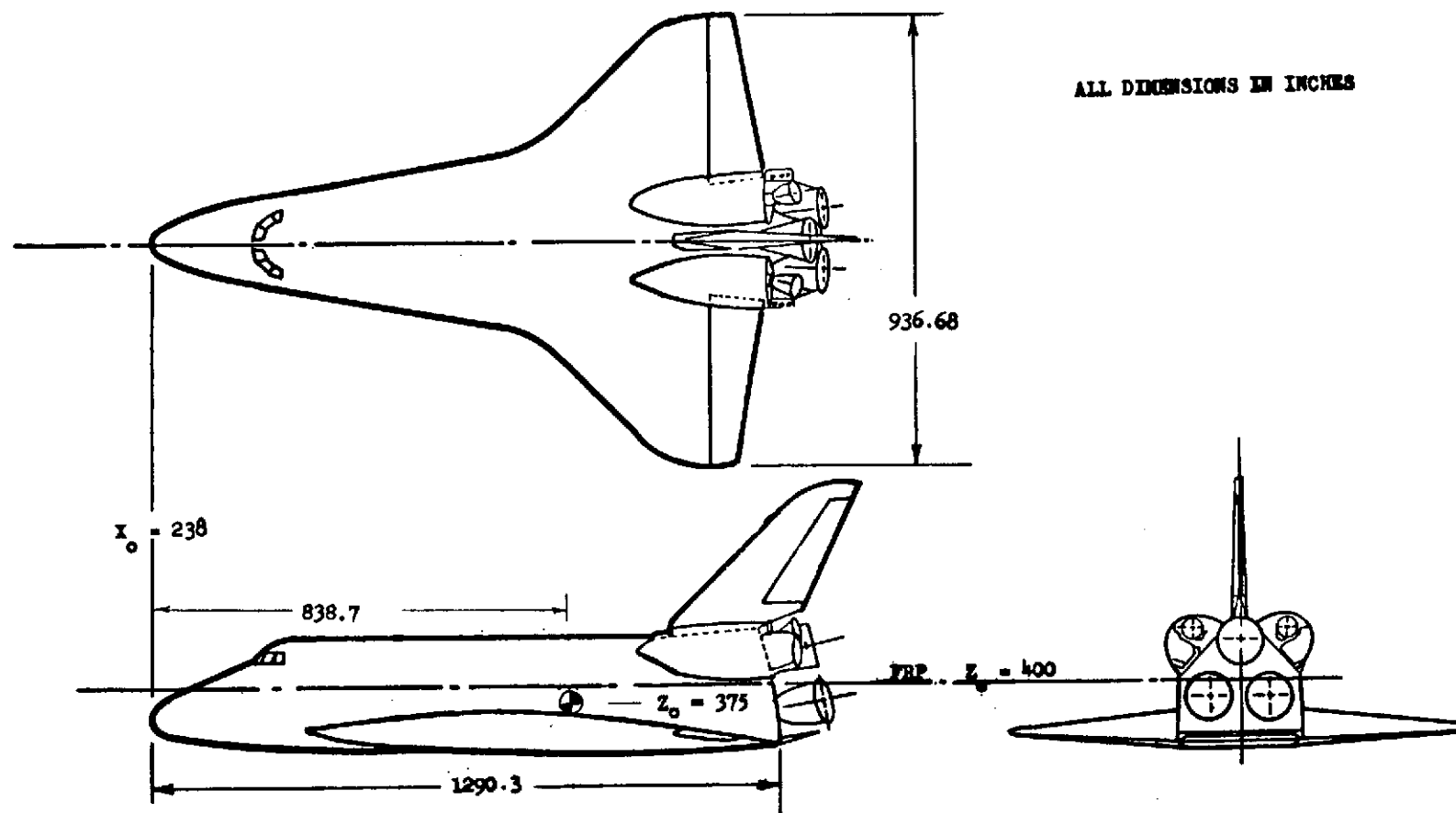
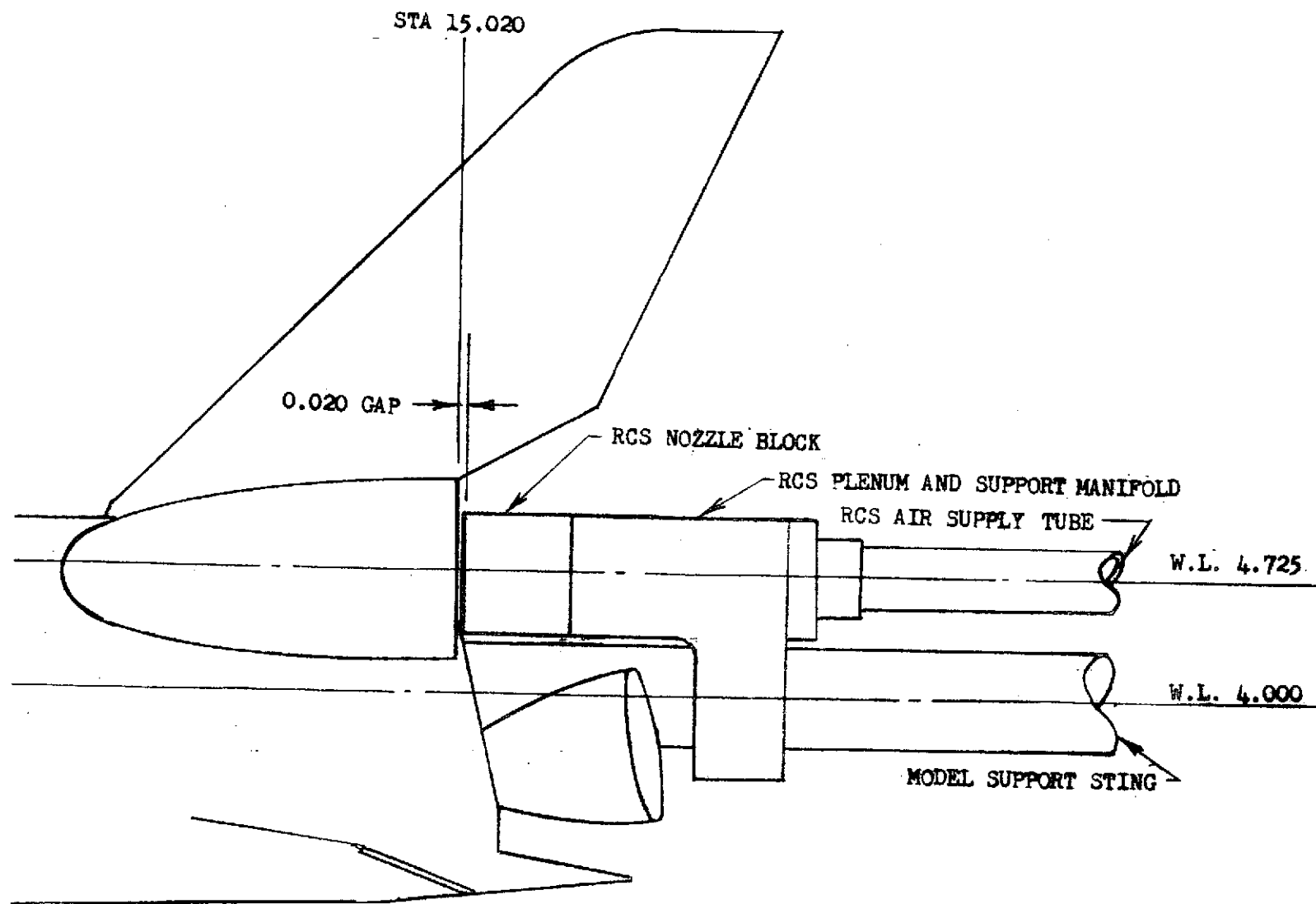


Figure 1. - Axis system



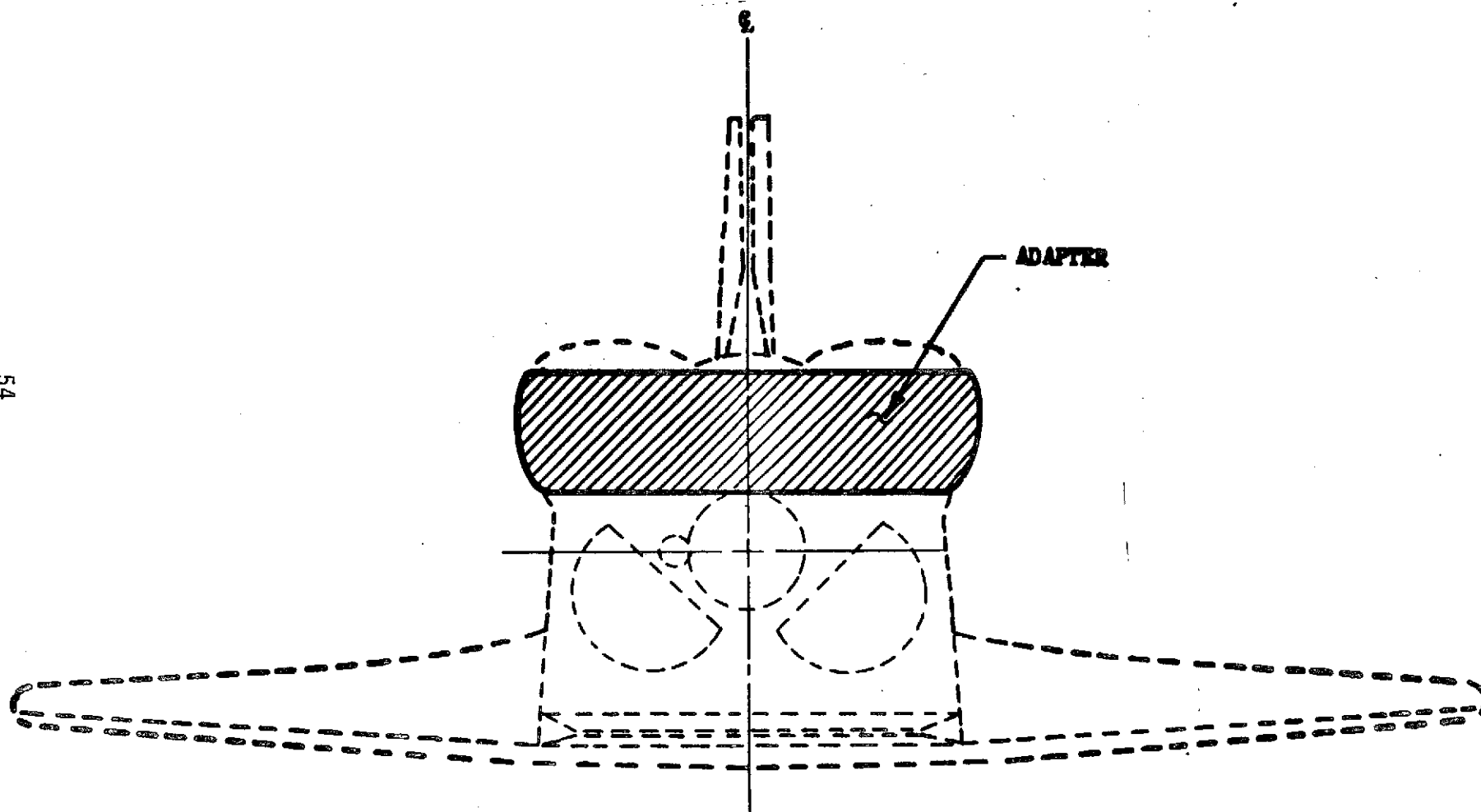
a. Orbiter Configuration

Figure 2. - Model sketches.



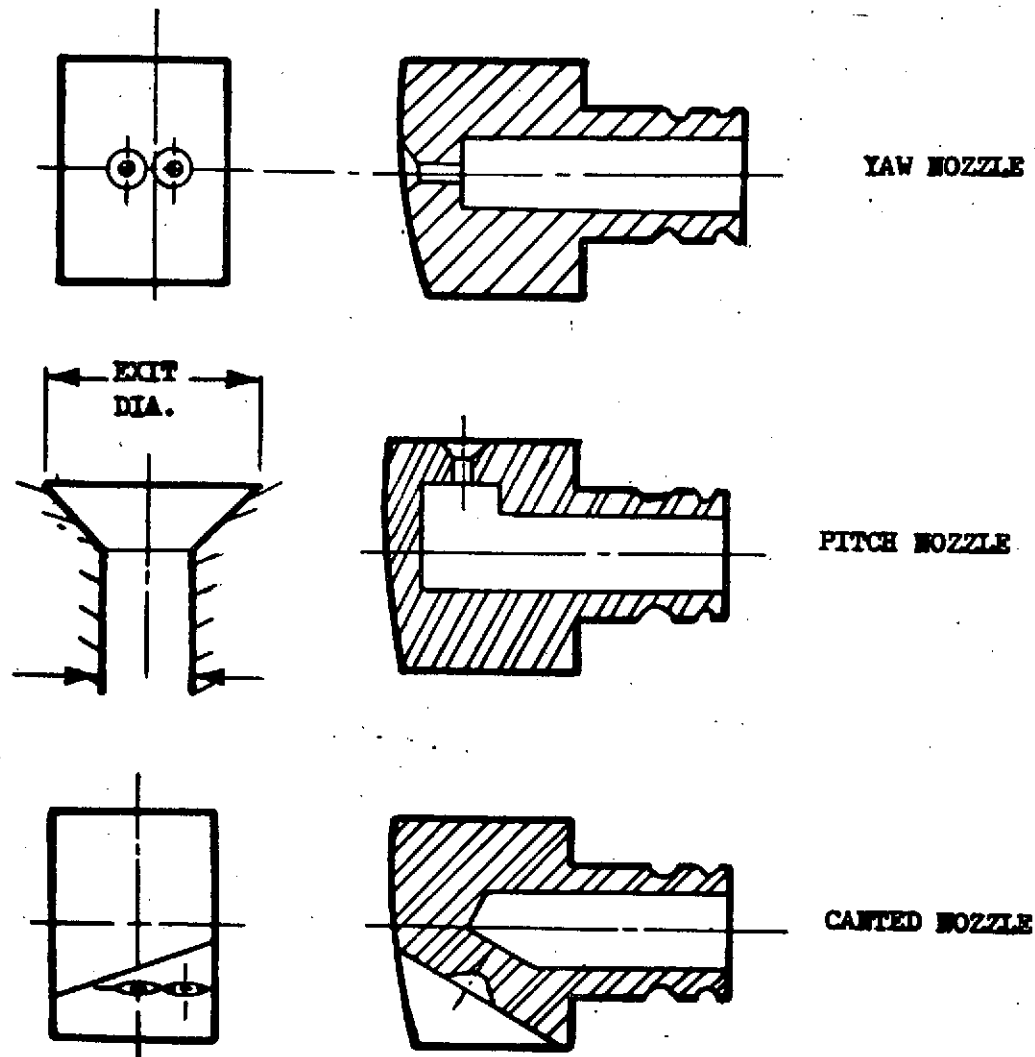
b. RCS Plenum Nozzle Block Installation

Figure 2. - Continued.



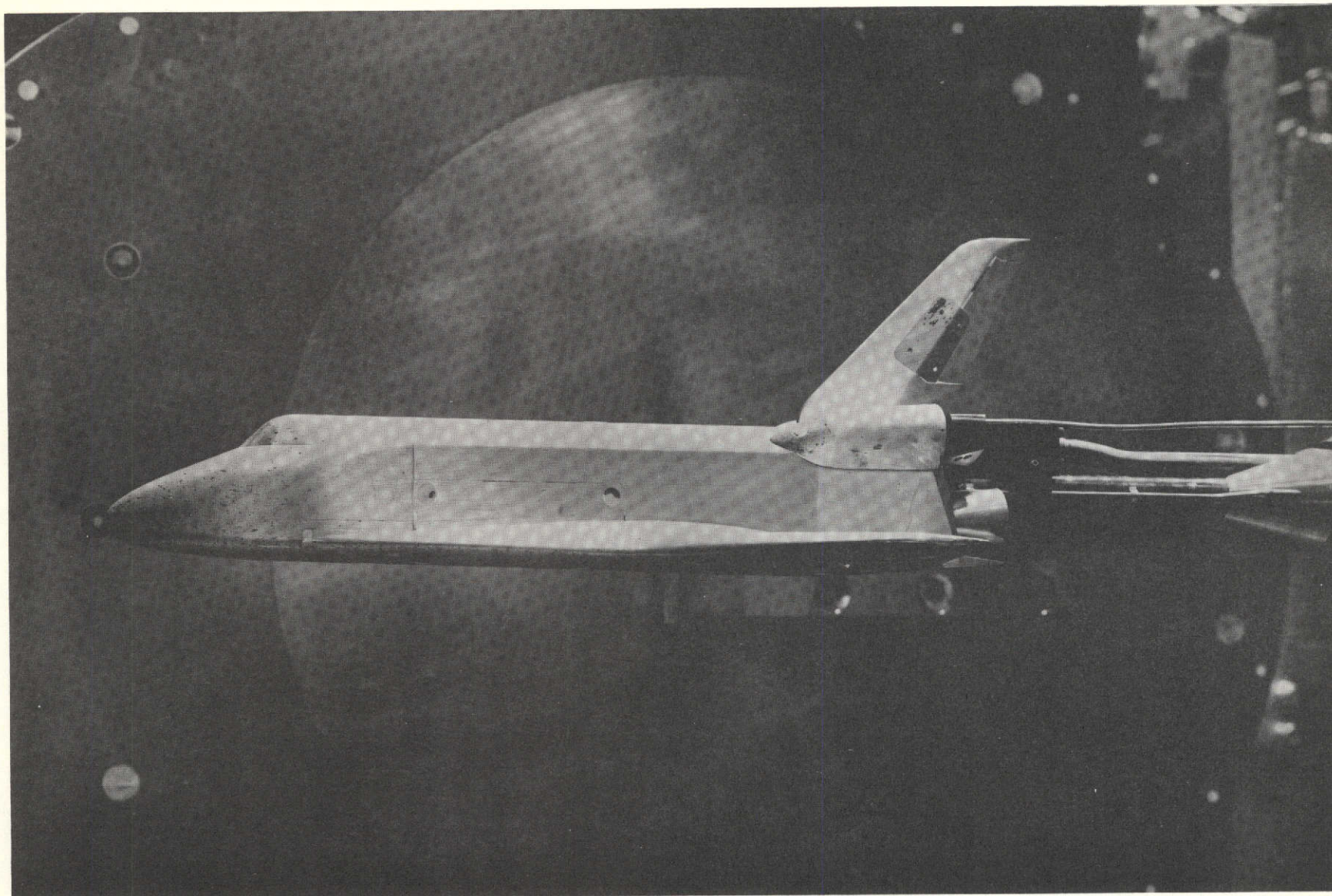
c. RCS Nozzle Adapter

Figure 2.- Continued.



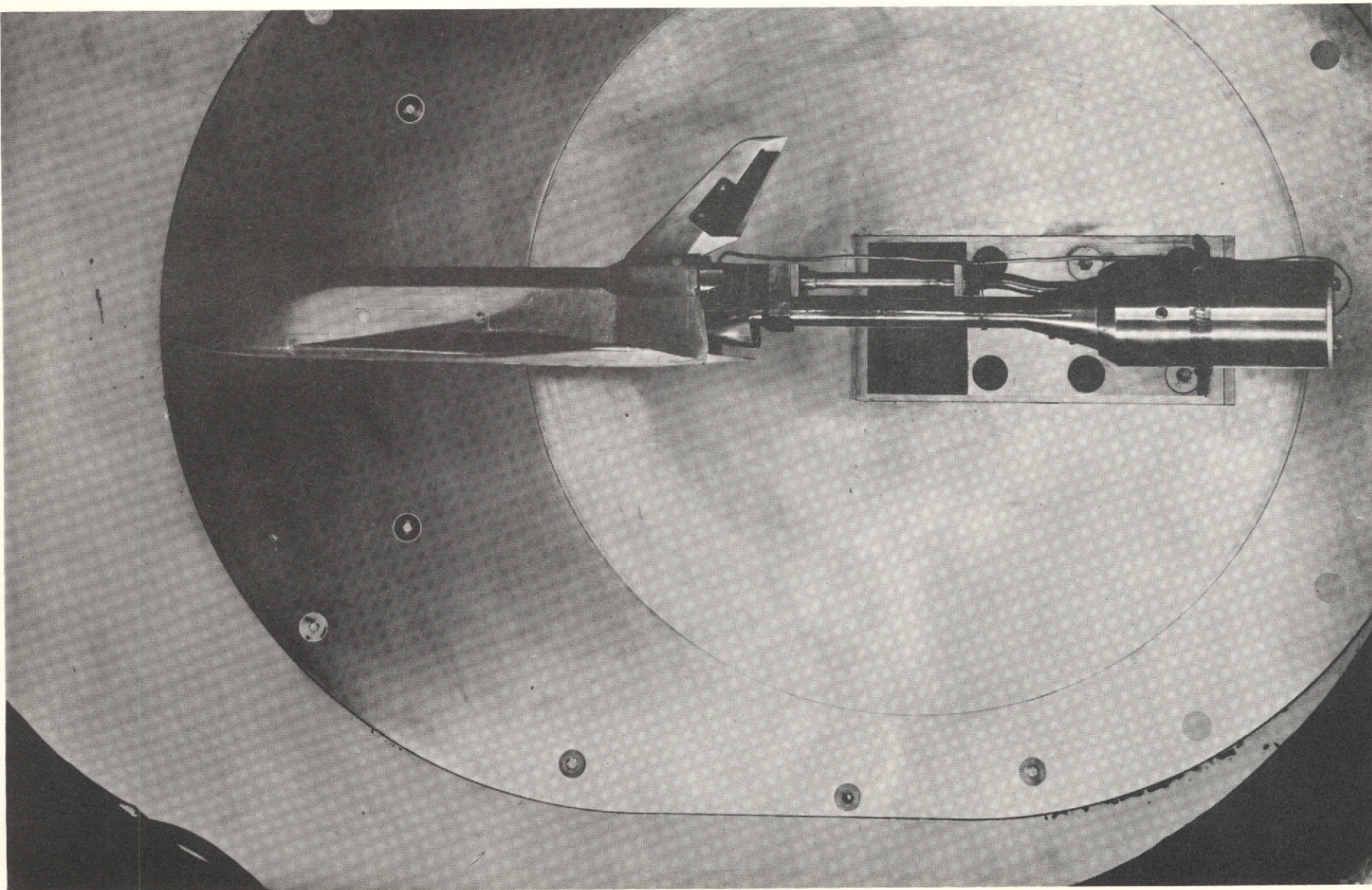
d. Model Nozzle Block Configurations

Figure 2. - Concluded.



a. Orbiter Installation Side View

Figure 3. - Model photographs.



b. Side View Of Nozzle Assembly Installed In Tunnel

Figure 3. - Concluded.

DATA FIGURES

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | AN/L | PC RCS | REFERENCE INFORMATION |
|-----------------|---|---------|-------|--------|-----------------------|
| [RHLF01] | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF 2680.0000 SQ.FT. |
| [RHLF10] | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF 474.8100 IN. |
| [RHLF12] | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF 936.6800 IN. |
| [RHLF03] | QA82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP 1076.7000 IN. |
| [RHLF04] | QA82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP .0000 IN. |
| [RHLF11] | QA82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 1.000 | .000 | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

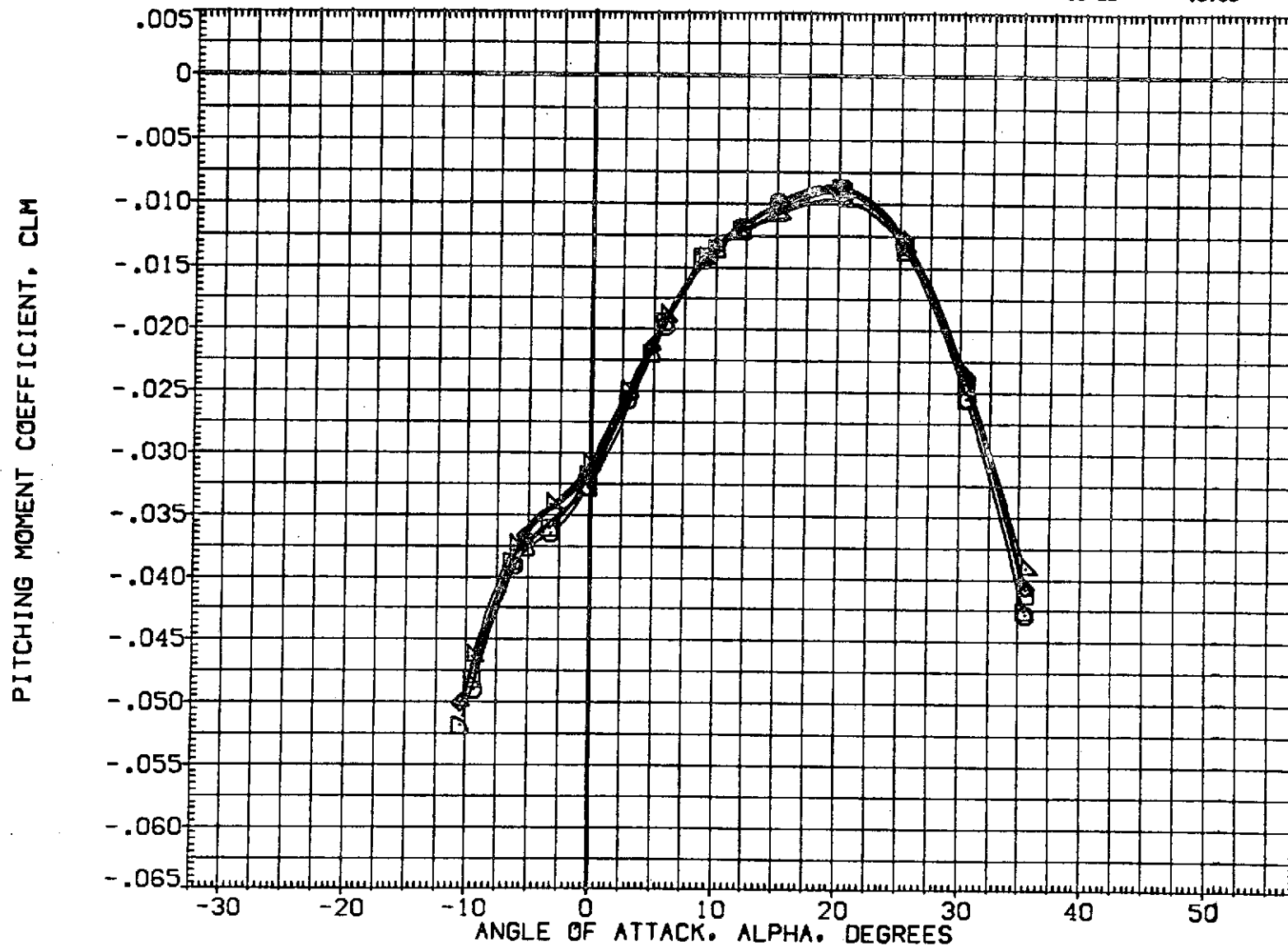


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \beta=0$
 (A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RU/L | PERCS | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|-------|-----------------------|-----------|---------|
| (2)HLF01 | QAS2 CFHT113 MODEL 32-0 GRB V/M19 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2690.0000 | 80. FT. |
| (2)HLF10 | QAS2 CFHT113 MODEL 32-0 GRB V/M19 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.9100 | IN. |
| (2)HLF12 | QAS2 CFHT113 MODEL 32-0 GRB V/M19 RCS OFF | 150.000 | 1.000 | .000 | SREF | 935.6800 | IN. |
| (2)HLF03 | QAS2 CFHT113 MODEL 32-0 GRB V/M14 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 | IN. |
| (2)HLF04 | QAS2 CFHT113 MODEL 32-0 GRB V/M15 RCS OFF | 150.000 | 1.000 | .000 | YMRP | 975.0000 | IN. |
| (2)HLF11 | QAS2 CFHT113 MODEL 32-0 GRB V/M15 RCS OFF | 150.000 | 1.000 | .000 | ZMRP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

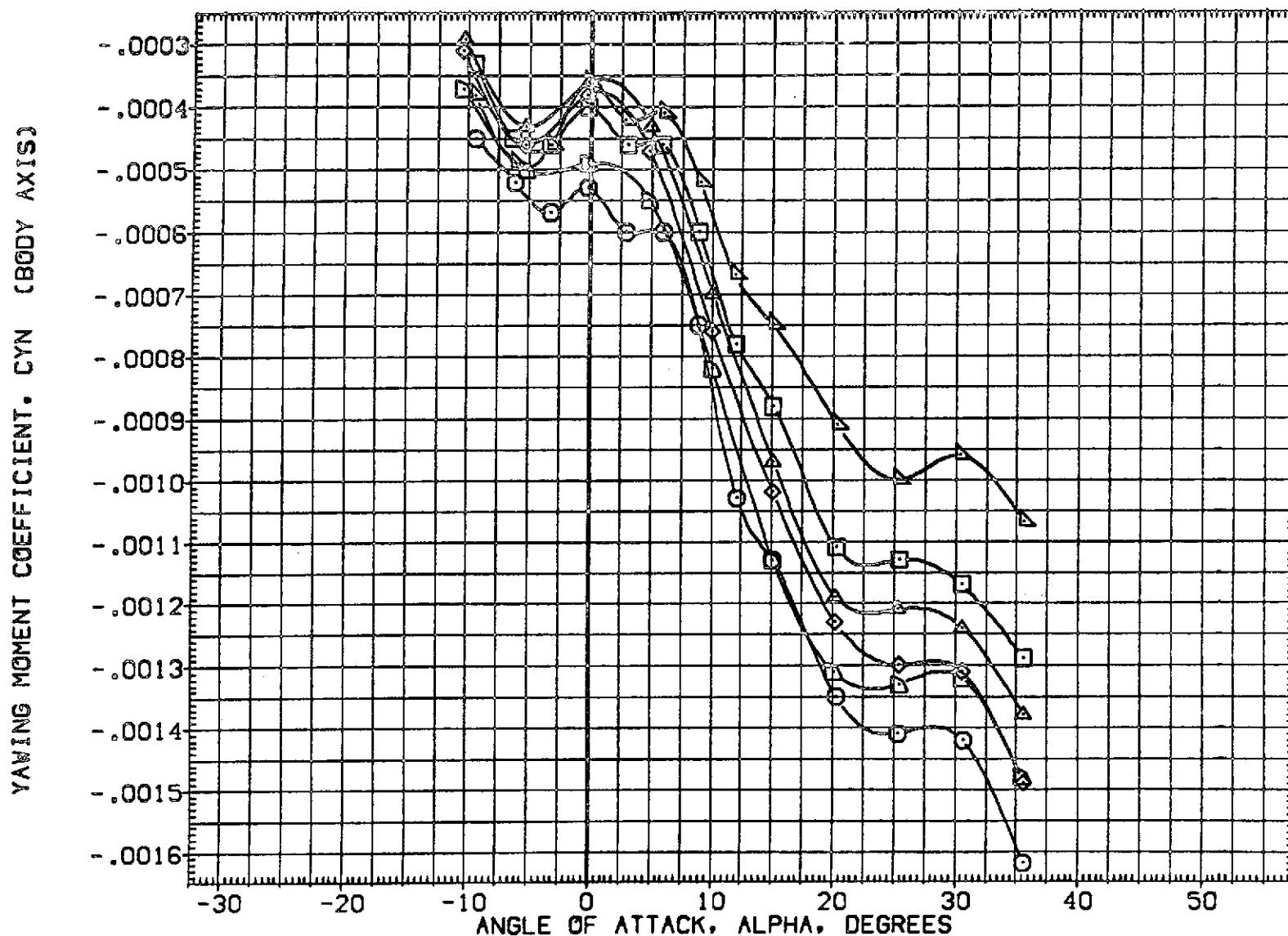


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \beta=0$

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RM/L | PCRC | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|------|-----------------------|-----------|--------|
| (RHLF01) | QA82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHLF10) | QA82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.8100 | IN. |
| (RHLF12) | QA82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF | 936.6800 | IN. |
| (RHLF03) | QA82 CFHT113 MODEL 32-0 GRB V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 | IN. |
| (RHLF04) | QA82 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP | .0000 | IN. |
| (RHLF11) | QA82 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | 1.000 | .000 | ZMRP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

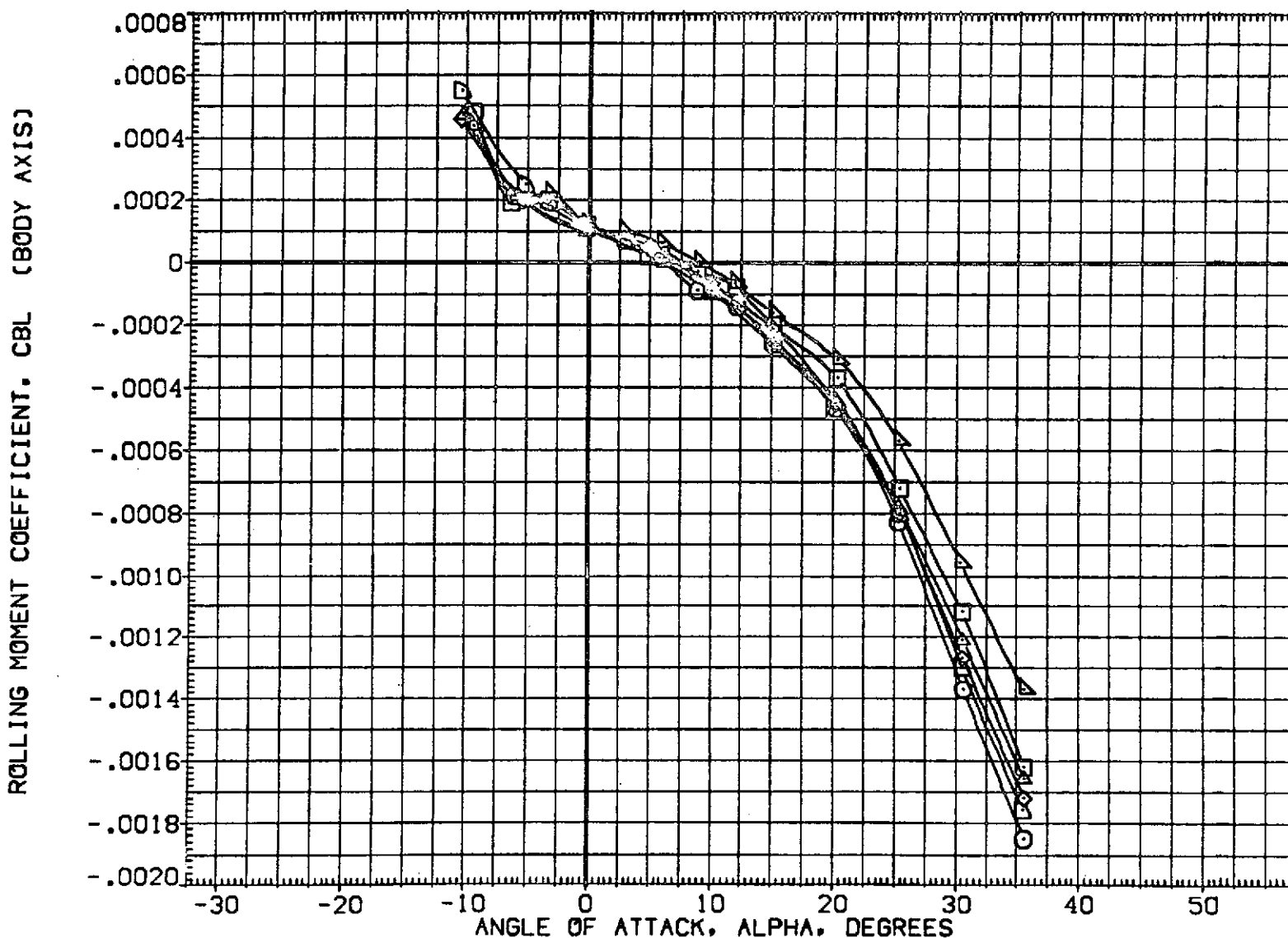


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, BETA=0
(A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RVL | FORCS | REFERENCE INFORMATION |
|-----------------|---|---------|-------|-------|-----------------------|
| (RHLF01) | QAS2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF 2680.0000 SQ.FT. |
| (RHLF10) | QAS2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF 474.8160 IN. |
| (RHLF12) | QAS2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF 936.6800 IN. |
| (RHLF03) | QAS2 CFHT113 MODEL 32-0 GRB V/N34 RCS OFF | 150.000 | 1.000 | .000 | XMRP 1076.7000 IN. |
| (RHLF04) | QAS2 CFHT113 MODEL 32-0 GRB V/N35 RCS OFF | 150.000 | 1.000 | .000 | YMRP .0000 IN. |
| (RHLF11) | QAS2 CFHT113 MODEL 32-0 GRB V/N35 RCS OFF | 150.000 | 1.000 | .000 | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

NORMAL FORCE COEFFICIENT, CN

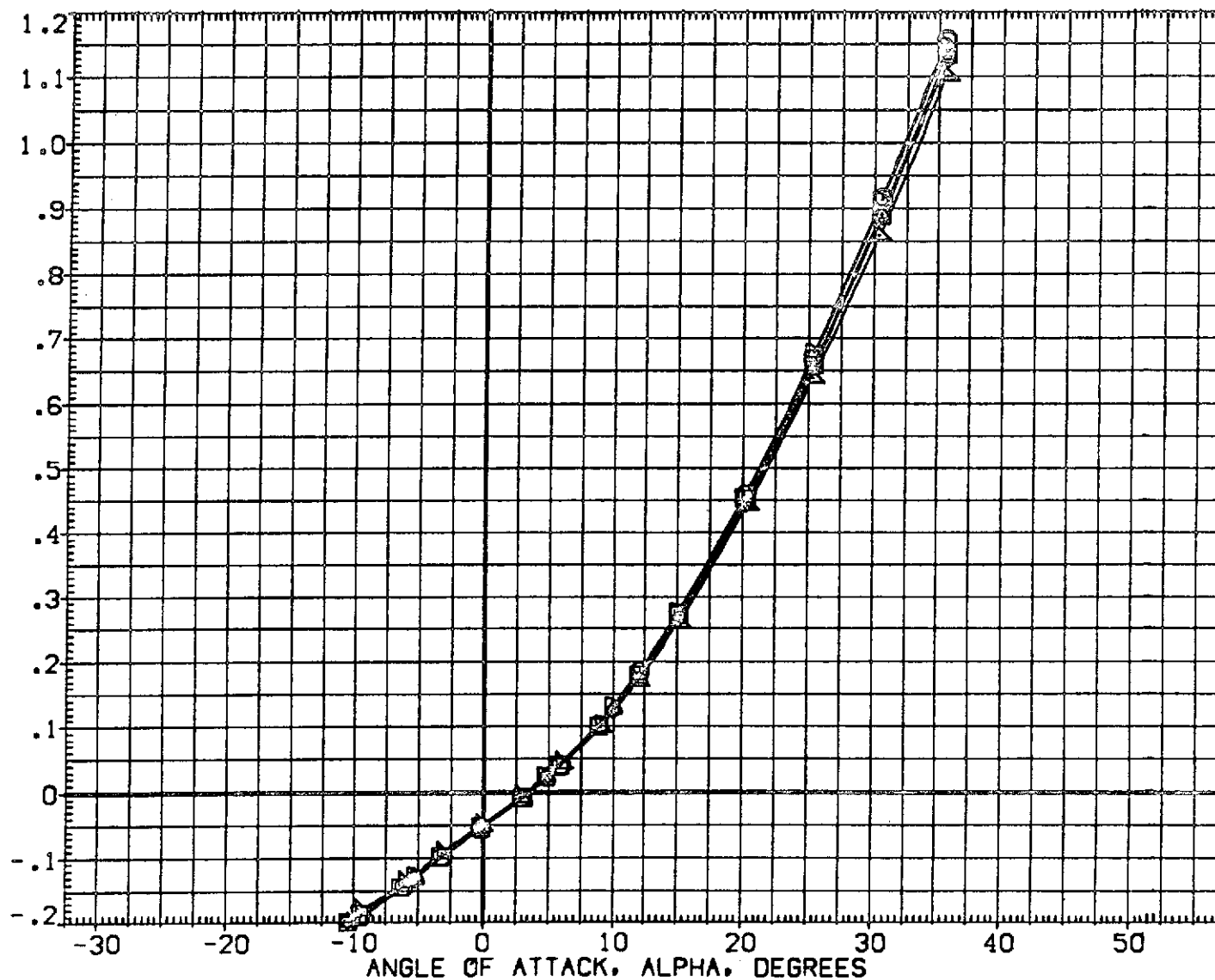


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, BETA=0
(A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RV/L | FORCS | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|-------|-----------------------|-----------|---------|
| (RHLF01) | GA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2680.0000 | 50. FT. |
| (RHLF10) | GA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.0100 | IN. |
| (RHLF12) | GA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF | 936.6800 | IN. |
| (RHLF03) | GA82 CFHT113 MODEL 32-0 GR8 V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 | IN. |
| (RHLF04) | GA82 CFHT113 MODEL 32-0 GR8 V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP | .0000 | IN. |
| (RHLF11) | GA82 CFHT113 MODEL 32-0 GR8 V/N85 RCS OFF | 150.000 | 1.000 | .000 | ZMRP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

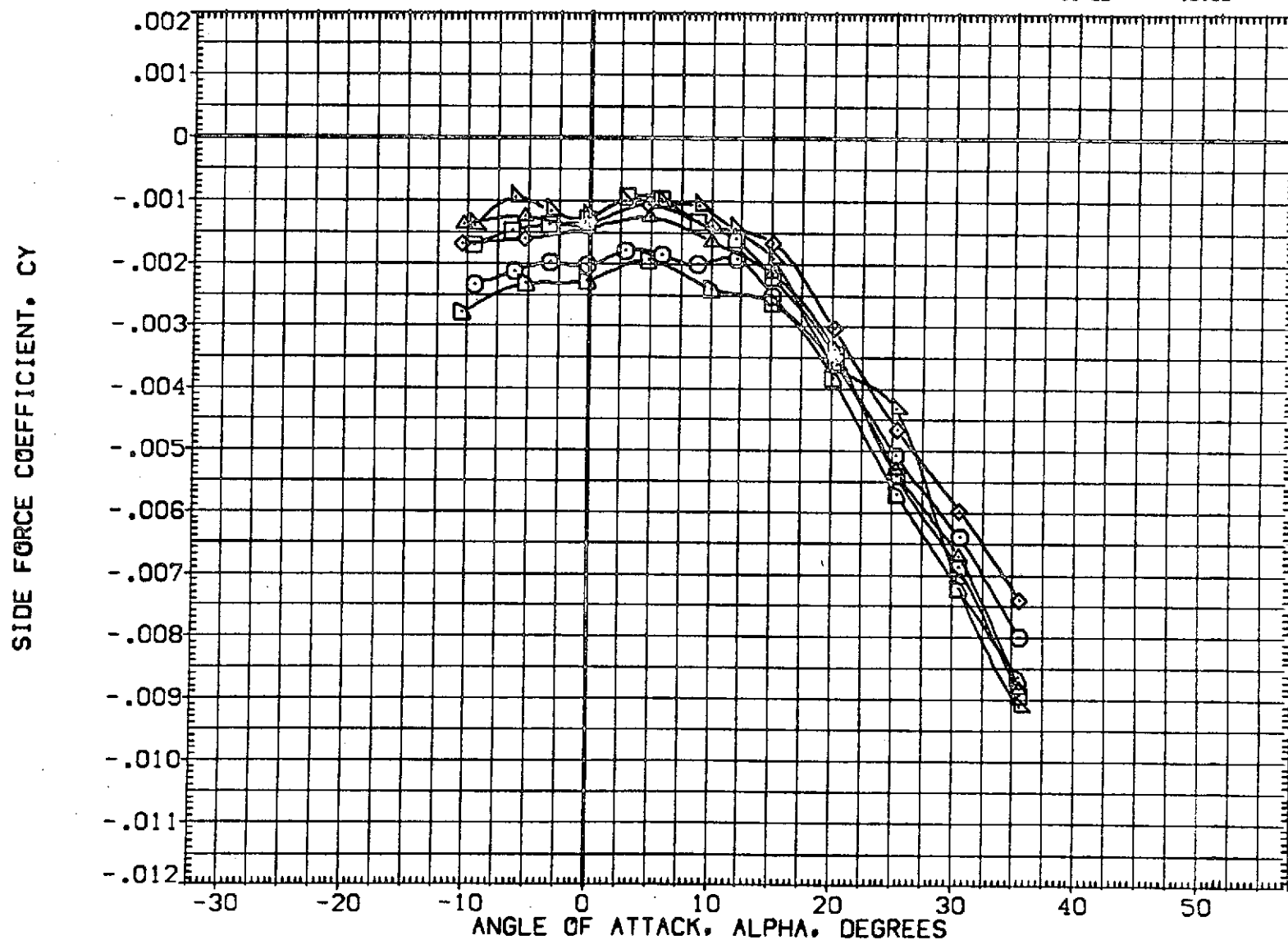


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \text{BETA}=0$

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PCRC3 | REFERENCE INFORMATION |
|-----------------|---|---------|-------|-------|-----------------------|
| [RHLF01] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF 2890.0000 SQ.FT. |
| [RHLF10] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF 474.8100 IN. |
| [RHLF12] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF 936.6800 IN. |
| [RHLF03] | QAB2 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP 1076.7000 IN. |
| [RHLF04] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP .0000 IN. |
| [RHLF11] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 1.000 | .000 | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

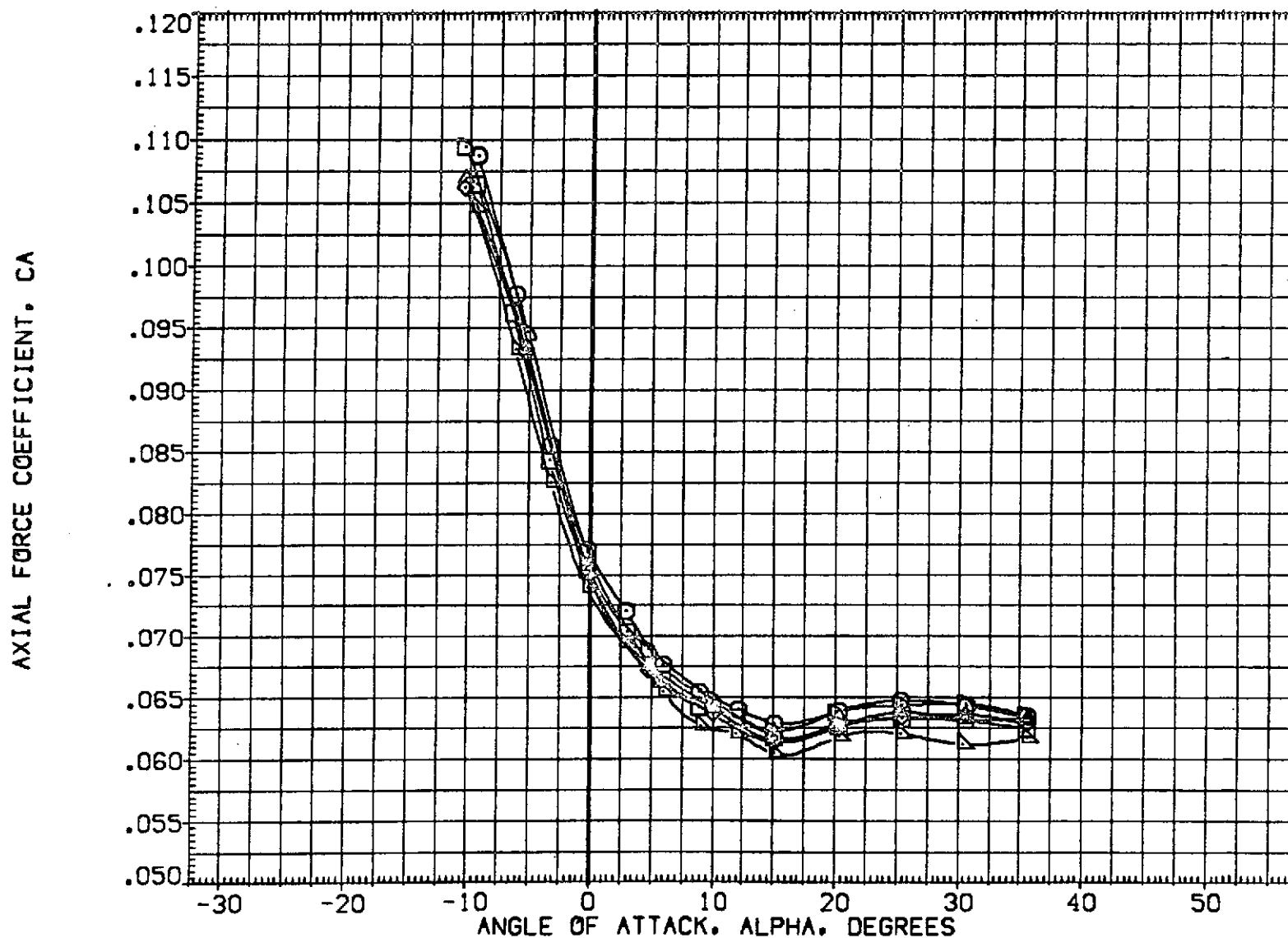


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \beta=0$

(A)MACH = 10.33

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| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RM/L | PCPCS | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|-------|-----------------------|------------------|
| [AHLF01] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2690.0000 SQ.FT. |
| [AHLF10] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.9100 IN. |
| [AHLF12] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF | 936.6800 IN. |
| [AHLF03] | 0A82 CFHT113 MODEL 32-0 GRB V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 IN. |
| [AHLF11] | 0A82 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

INCREMENTAL PITCHING MOMENT COEFFICIENT, DLICLM

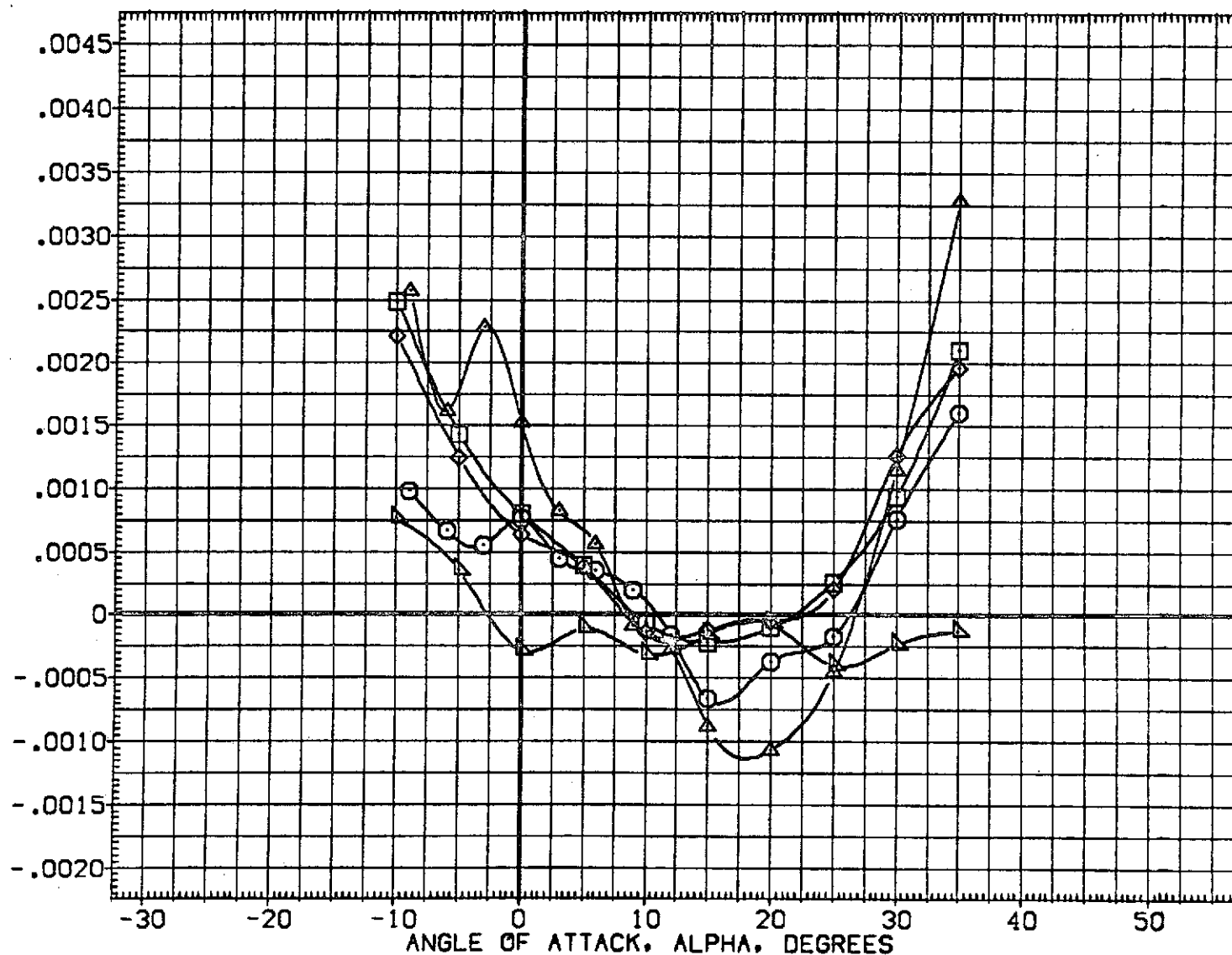


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, BETA=0

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RM/L | PCRS | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|------|-----------------------|-----------|---------|
| [AHLF01] | GA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2630.0000 | 50. FT. |
| [AHLF10] | GA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.8100 | IN. |
| [AHLF12] | GA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 935.6900 | IN. |
| [AHLF03] | GA82 CFHT113 MODEL 32-0 GR8 V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 | IN. |
| [AHLF11] | GA82 CFHT113 MODEL 32-0 GR8 V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP | .0000 | IN. |
| | | | | | ZMRP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

INCREMENTAL YAWING MOMENT COEFFICIENT, DLTCYN

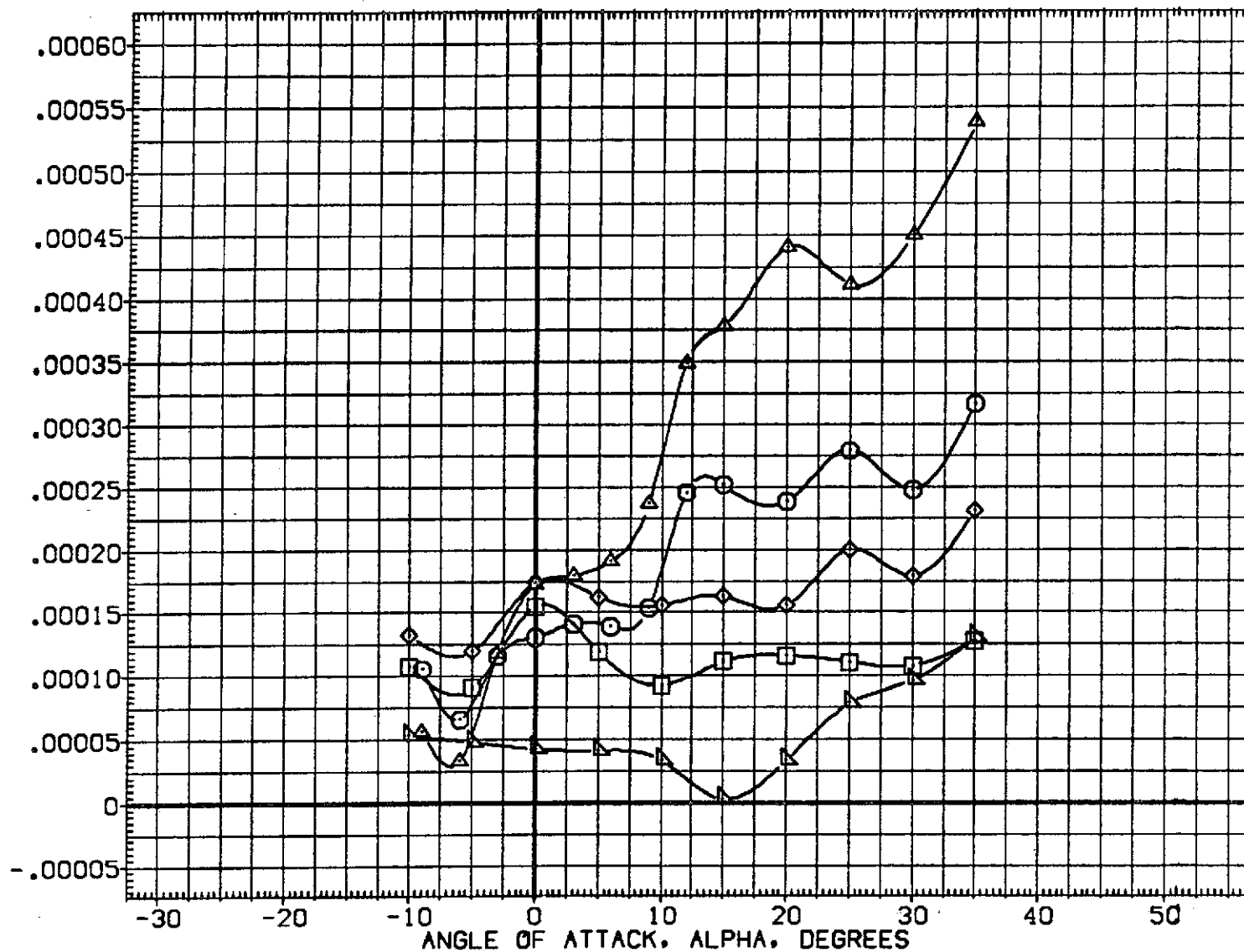


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, BETA=0
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | FORCS | REFERENCE INFORMATION |
|-----------------|---|---------|-------|-------|-----------------------|
| [AHLF01] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF 2690.0000 SQ.FT. |
| [AHLF10] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF 474.8100 IN. |
| [AHLF12] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF 935.6800 IN. |
| [AHLF03] | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP 1076.7000 IN. |
| [AHLF11] | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP .0000 IN. |
| | | | | | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

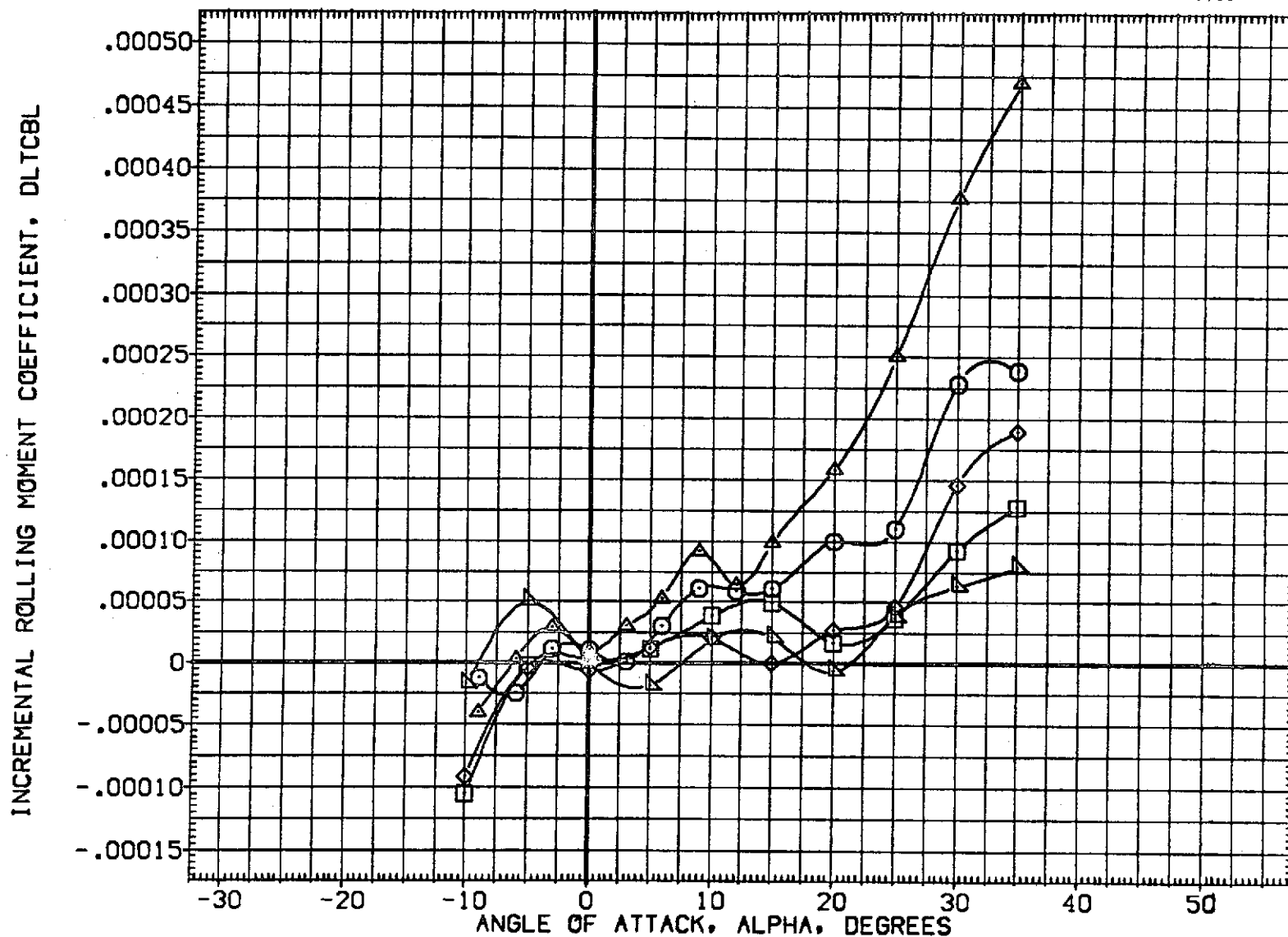


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, BETA=0

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | AN/L | PCRC | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|------|-----------------------|------------------|
| {AHLF01} | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2690.0000 SQ.FT. |
| {AHLF10} | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.9100 IN. |
| {AHLF12} | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF | 936.6300 IN. |
| {AHLF03} | QAB2 CFHT113 MODEL 32-0 GRB V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 IN. |
| {AHLF11} | QAB2 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

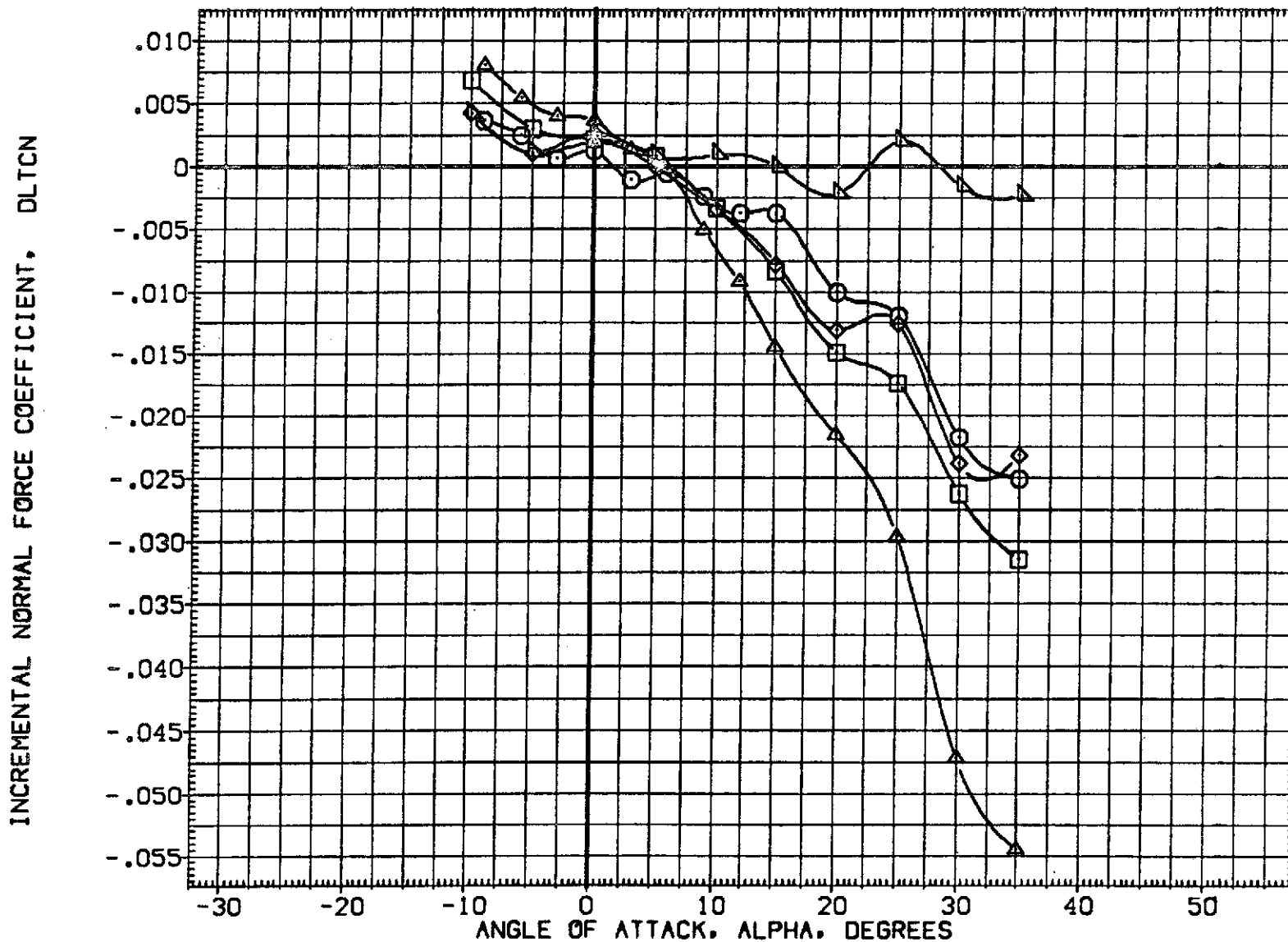


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \beta=0$

(A)MACH = 10.30

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| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RV/L | PC RCS | REFERENCE INFORMATION |
|-----------------|---|---------|-------|--------|-----------------------|
| [AHLF01] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF 2690.0000 SQ.FT. |
| [AHLF10] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF 474.8100 IN. |
| [AHLF12] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF 936.6800 IN. |
| [AHLF03] | 0A82 CFHT113 MODEL 32-0 GR8 V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP 1076.7000 IN. |
| [AHLF11] | 0A82 CFHT113 MODEL 32-0 GR8 V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP .0000 IN. |
| | | | | | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

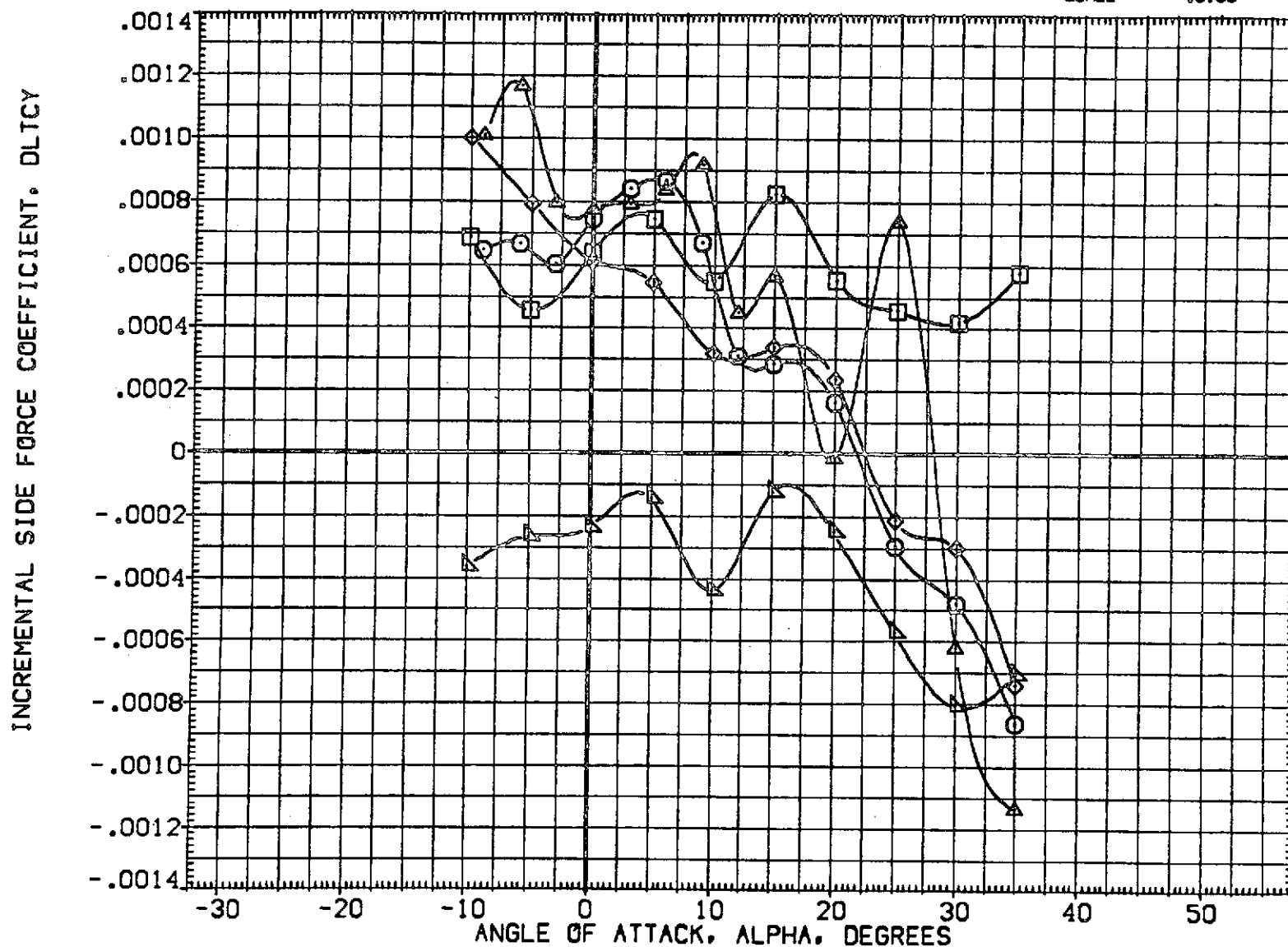


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, BETA=0

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | R/V/L | PCRC | REFERENCE INFORMATION |
|-----------------|---|---------|-------|------|-----------------------|
| [AHLF01] | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF 2690.0000 SQ.FT. |
| [AHLF10] | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | LREF 474.8100 IN. |
| [AHLF12] | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | BREF 936.6800 IN. |
| [AHLF03] | QA82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | 1.000 | .000 | XMRP 1076.7000 IN. |
| [AHLF11] | QA82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 1.000 | .000 | YMRP .0000 IN. |
| | | | | | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

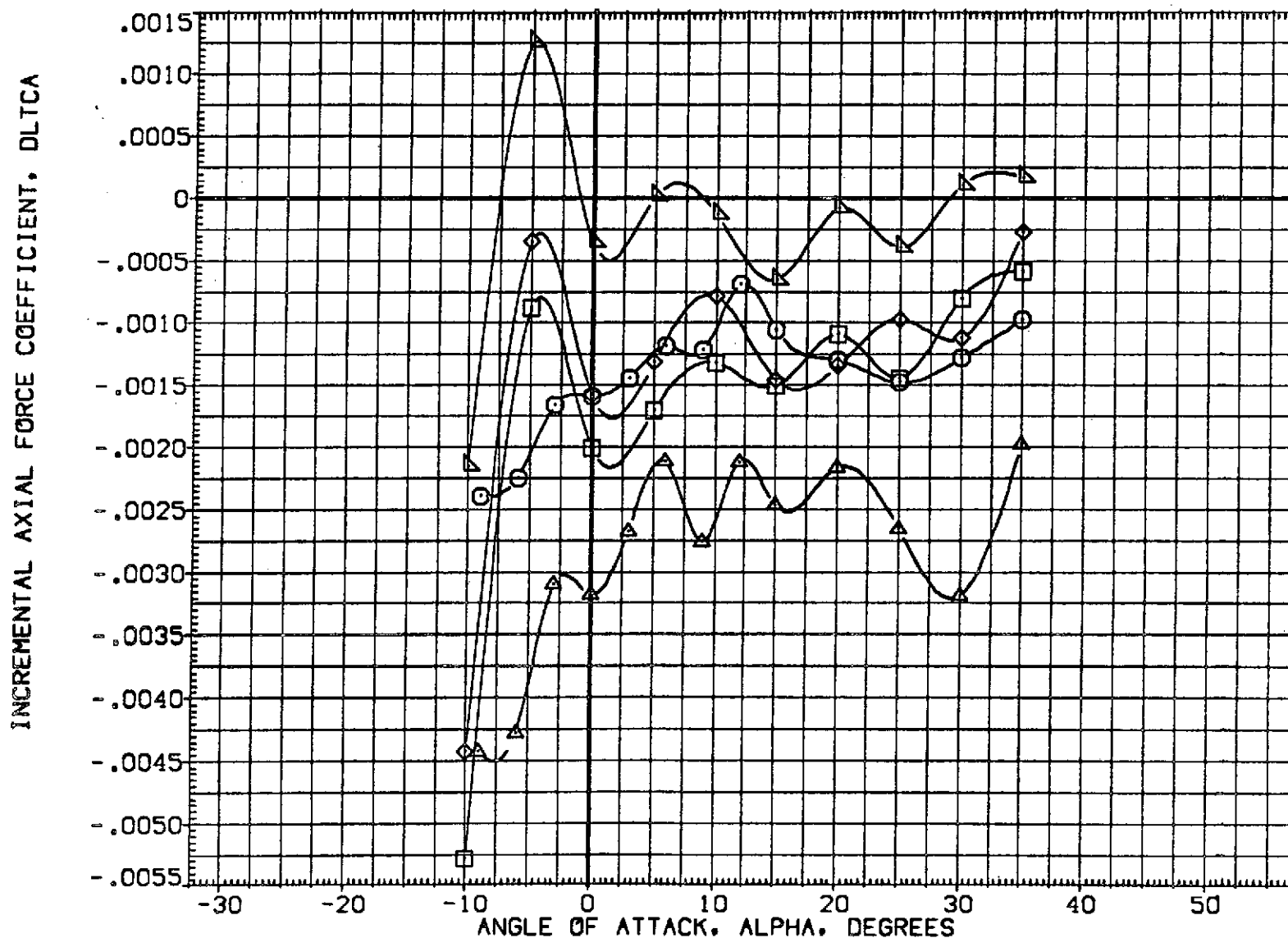


FIG. 01 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \beta=0$

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RV/L | PC RCS | REFERENCE INFORMATION |
|-----------------|---|---------|------|--------|-----------------------|
| (RHLF05) ○ | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLF09) □ | QA82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 125.000 | .850 | .000 | LREF 474.8100 IN. |
| (RHLF13) × | QA82 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .850 | .000 | BREF 936.6800 IN. |
| (RHLF14) △ | QA82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 125.000 | .850 | .000 | XMRP 1076.7000 IN. |
| | | | | | YMRP .0000 IN. |
| | | | | | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

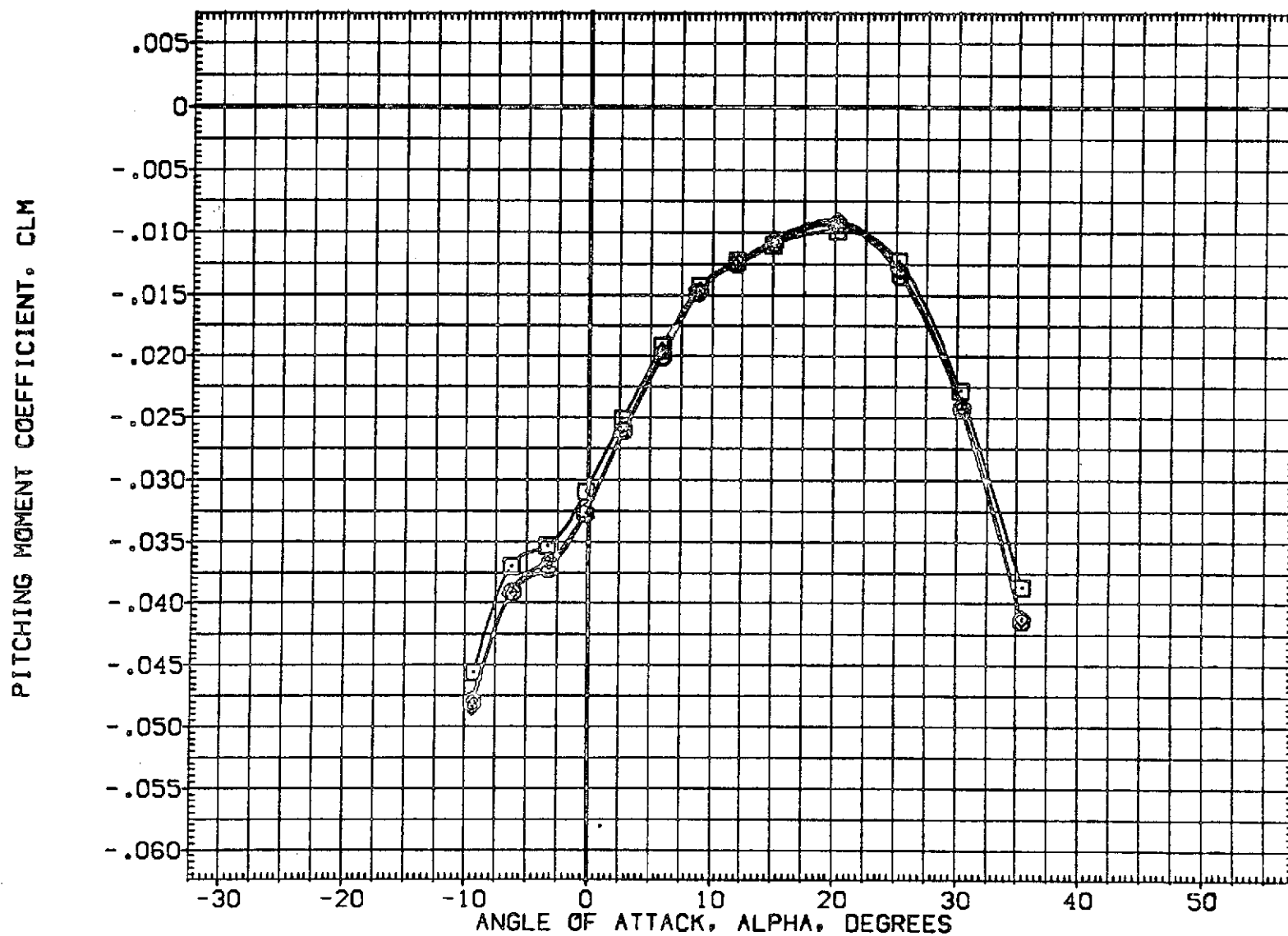


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=125, BETA=0

(A) MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RM/L | PCRCB | REFERENCE INFORMATION | |
|-----------------|---|---------|------|-------|-----------------------|------------------|
| RHLF05 | GA82 CFHT113 MODEL 32-0 GRB V/N48 RCS OFF | 125.000 | .850 | .000 | SREF | 2390.0000 SQ.FT. |
| RHLF08 | GA82 CFHT113 MODEL 32-0 GRB V/N52 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 IN. |
| RHLF13 | GA82 CFHT113 MODEL 32-0 GRB V/N80 RCS OFF | 125.000 | .850 | .000 | BREF | 935.6800 IN. |
| RHLF14 | GA82 CFHT113 MODEL 32-0 GRB V/N84 RCS OFF | 125.000 | .850 | .000 | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |



FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125, \text{BETA}=0$

(A) MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RV/L | PCRC5 | REFERENCE INFORMATION | |
|-----------------|---|---------|------|-------|-----------------------|------------------|
| (R)LF05) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | SREF | 2690.0000 SQ.FT. |
| (R)LF09) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 IN. |
| (R)LF13) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 IN. |
| (R)LF14) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 125.000 | .850 | .000 | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

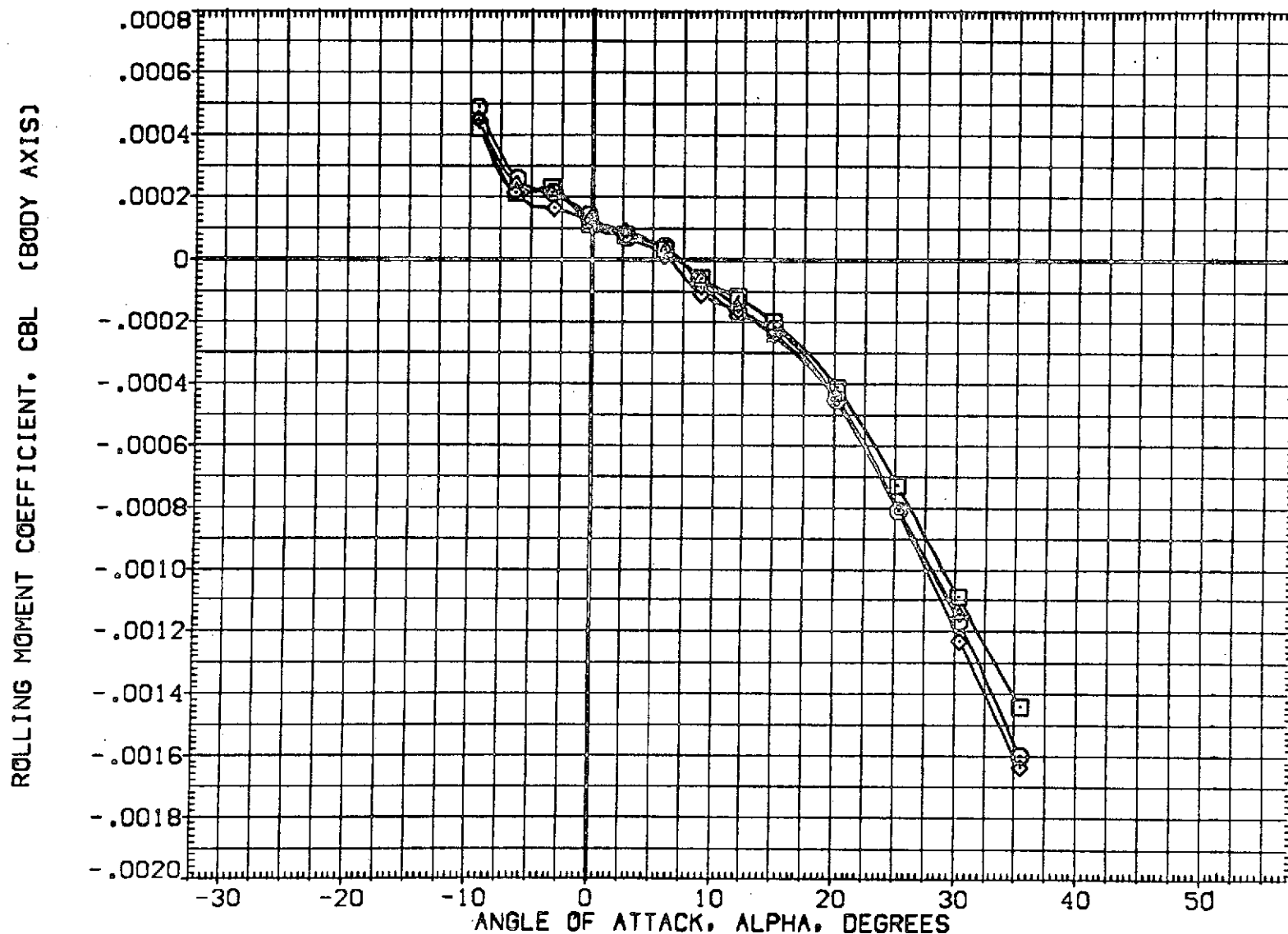


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=125, BETA=0
 (A) MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PCRC | REFERENCE INFORMATION | |
|-----------------|---|---------|------|------|-----------------------|------------------|
| (RHLF05) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 RCS OFF | 125.000 | .850 | .000 | SREF | 2630.0000 SQ.FT. |
| (RHLF08) | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 IN. |
| (RHLF13) | 0A82 CFHT113 MODEL 32-0 OR8 V/N80 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 IN. |
| (RHLF14) | 0A82 CFHT113 MODEL 32-0 OR8 V/N84 RCS OFF | 125.000 | .850 | .000 | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

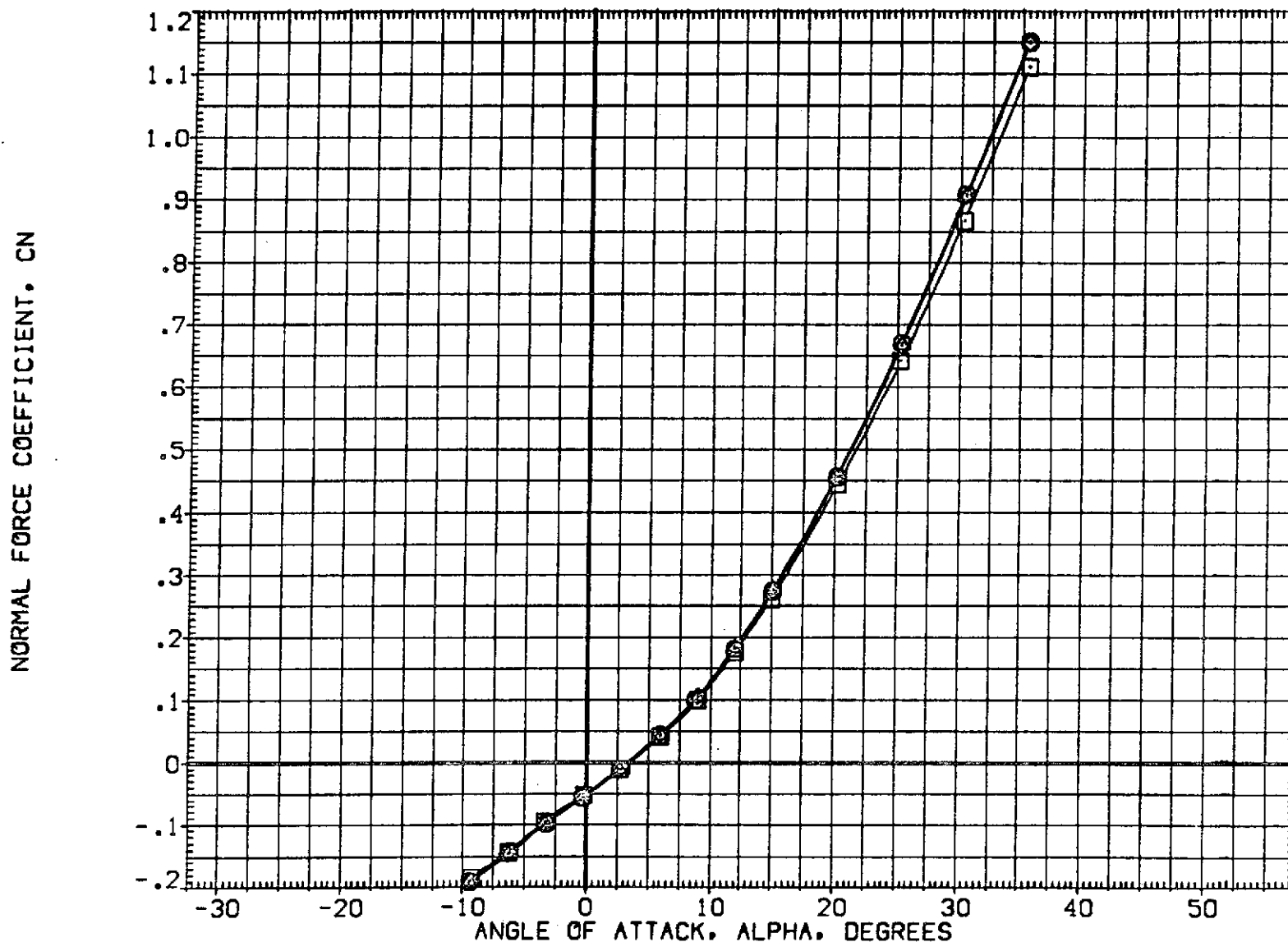


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125, \text{BETA}=0$
 (A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PC RCS | REFERENCE INFORMATION |
|-----------------|---|---------|------|--------|-----------------------|
| (R)LF05 | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | SREF 2690.0000 SQ.FT. |
| (R)LF08 | 0A82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 125.000 | .850 | .000 | LREF 474.8100 IN. |
| (R)LF13 | 0A82 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .850 | .000 | BREF 936.6800 IN. |
| (R)LF14 | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 125.000 | .850 | .000 | XMRP 1076.7000 IN. |
| | | | | | YMRP .0000 IN. |
| | | | | | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

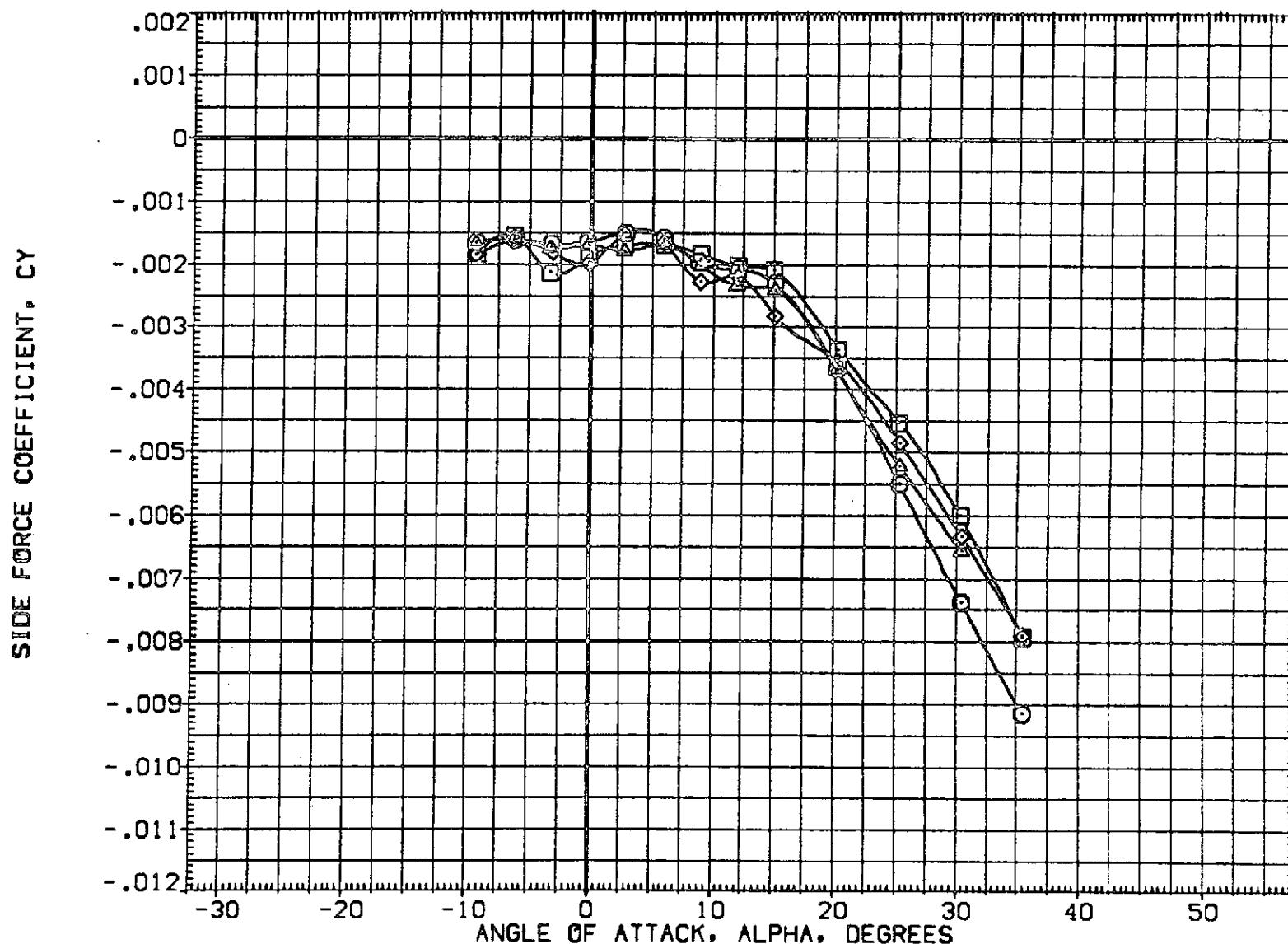


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125, \text{BETA}=0$
 (A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PCPCS | REFERENCE INFORMATION | |
|-----------------|---|---------|------|-------|-----------------------|------------------|
| [RHLF05] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHLF09] | QAB2 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 IN. |
| [RHLF13] | QAB2 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 IN. |
| [RHLF14] | QAB2 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 125.000 | .850 | .000 | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

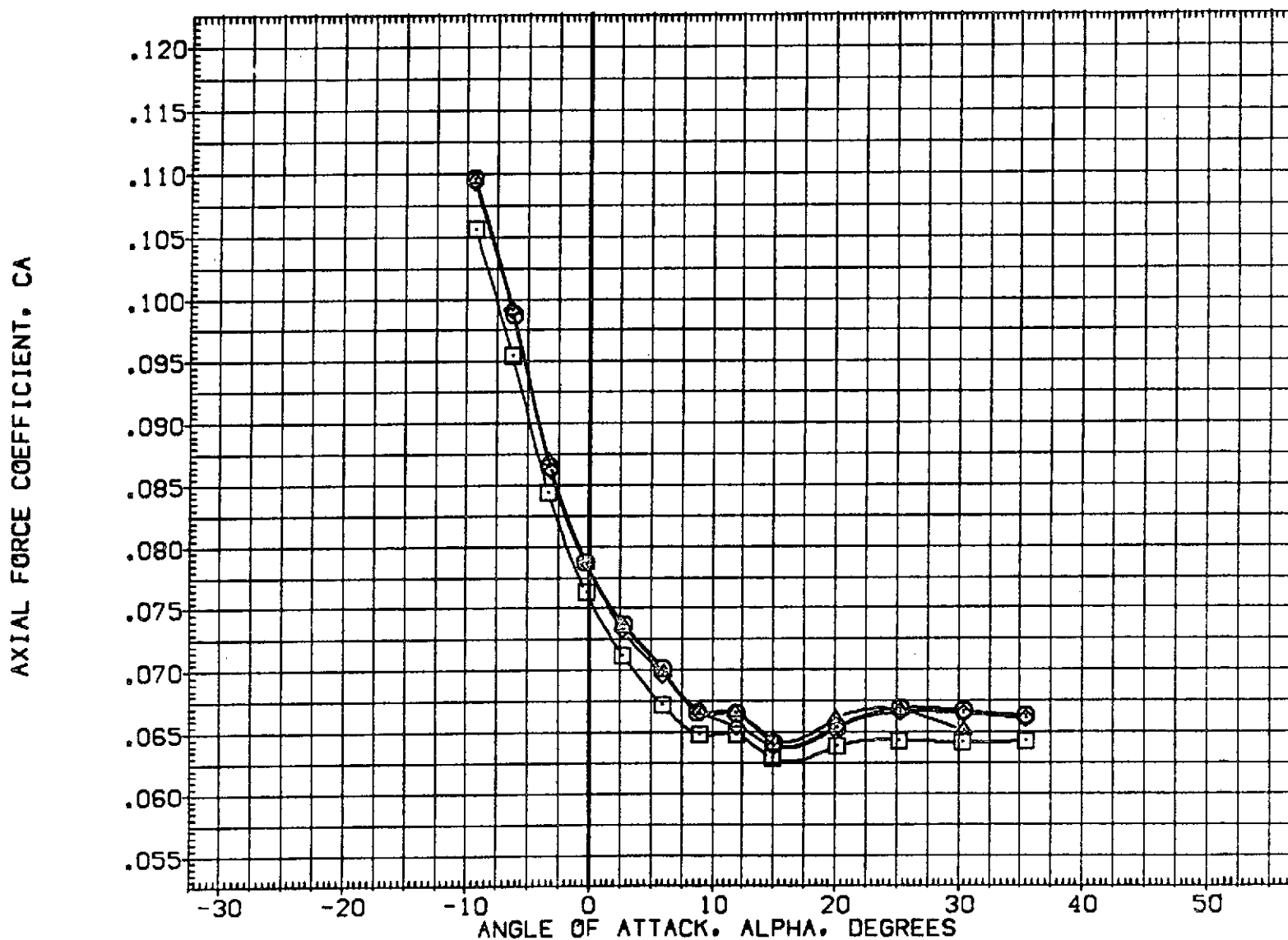


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=125, BETA=0

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PCRC5 | REFERENCE INFORMATION | |
|-----------------|---|---------|------|-------|-----------------------|------------------|
| [AHLF09] | QAB2 CFHT113 MODEL 32-0 OR8 V/N52 RCS OFF | 125.000 | .850 | .000 | SREF | 2690.0000 SQ.FT. |
| [AHLF13] | QAB2 CFHT113 MODEL 32-0 OR8 V/N80 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 IN. |
| [AHLF14] | QAB2 CFHT113 MODEL 32-0 OR8 V/N84 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 IN. |
| | | | | | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

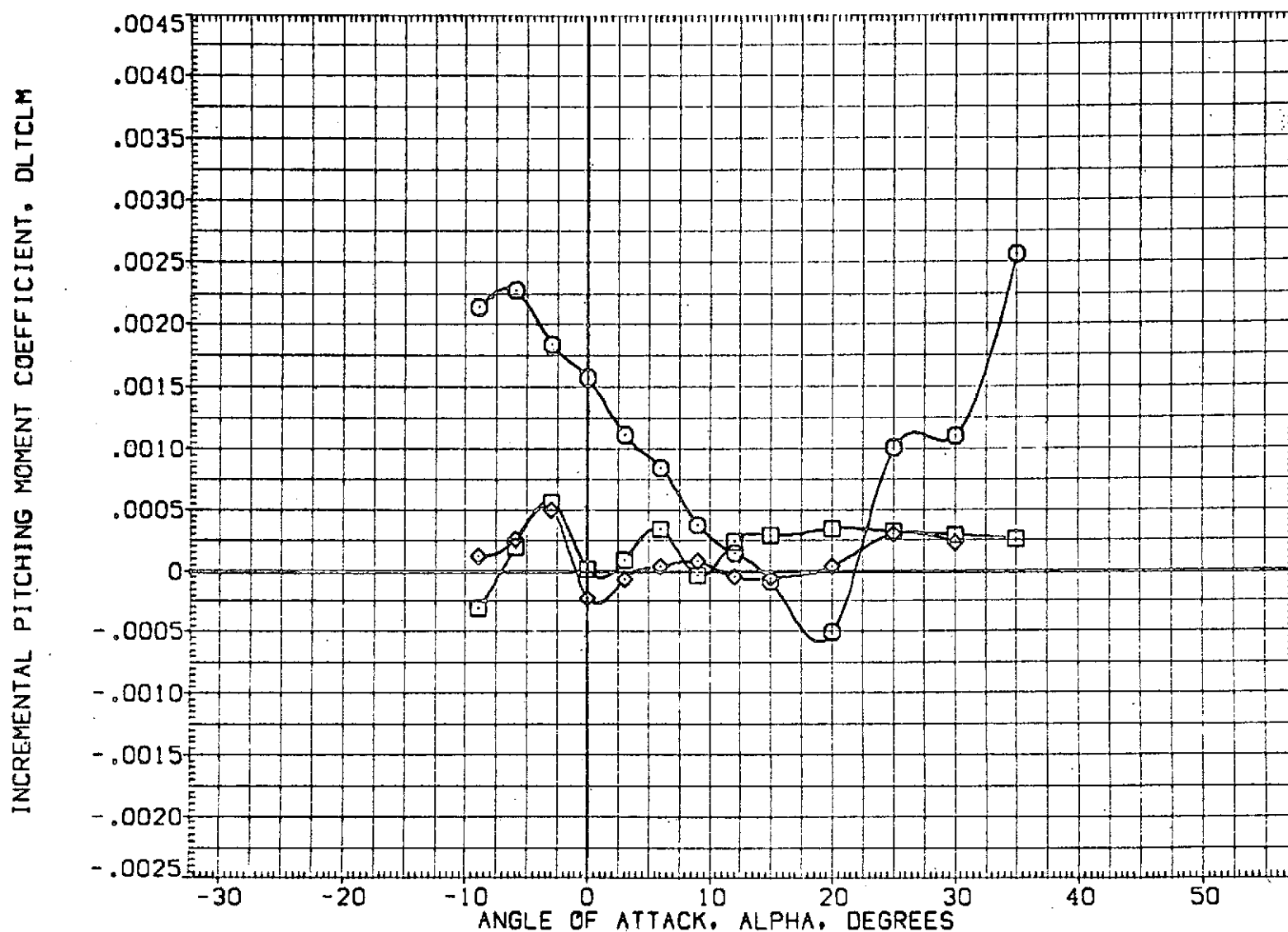


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125, \beta=0$
 (A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PC RCS | REFERENCE INFORMATION | |
|-----------------|---|---------|------|--------|-----------------------|------------------|
| (AHLF09) | 0A82 CFHT113 MODEL 32-0 DR8 V/N52 RCS OFF | 125.000 | .850 | .000 | SREF | 2690.0000 SQ.FT. |
| (AHLF13) | 0A82 CFHT113 MODEL 32-0 DR8 V/N80 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 IN. |
| (AHLF14) | 0A82 CFHT113 MODEL 32-0 DR8 V/N84 RCS OFF | 125.000 | .850 | .000 | SREF | 936.6800 IN. |
| | | | | | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

INCREMENTAL YAWING MOMENT COEFFICIENT, CL_{CYN}

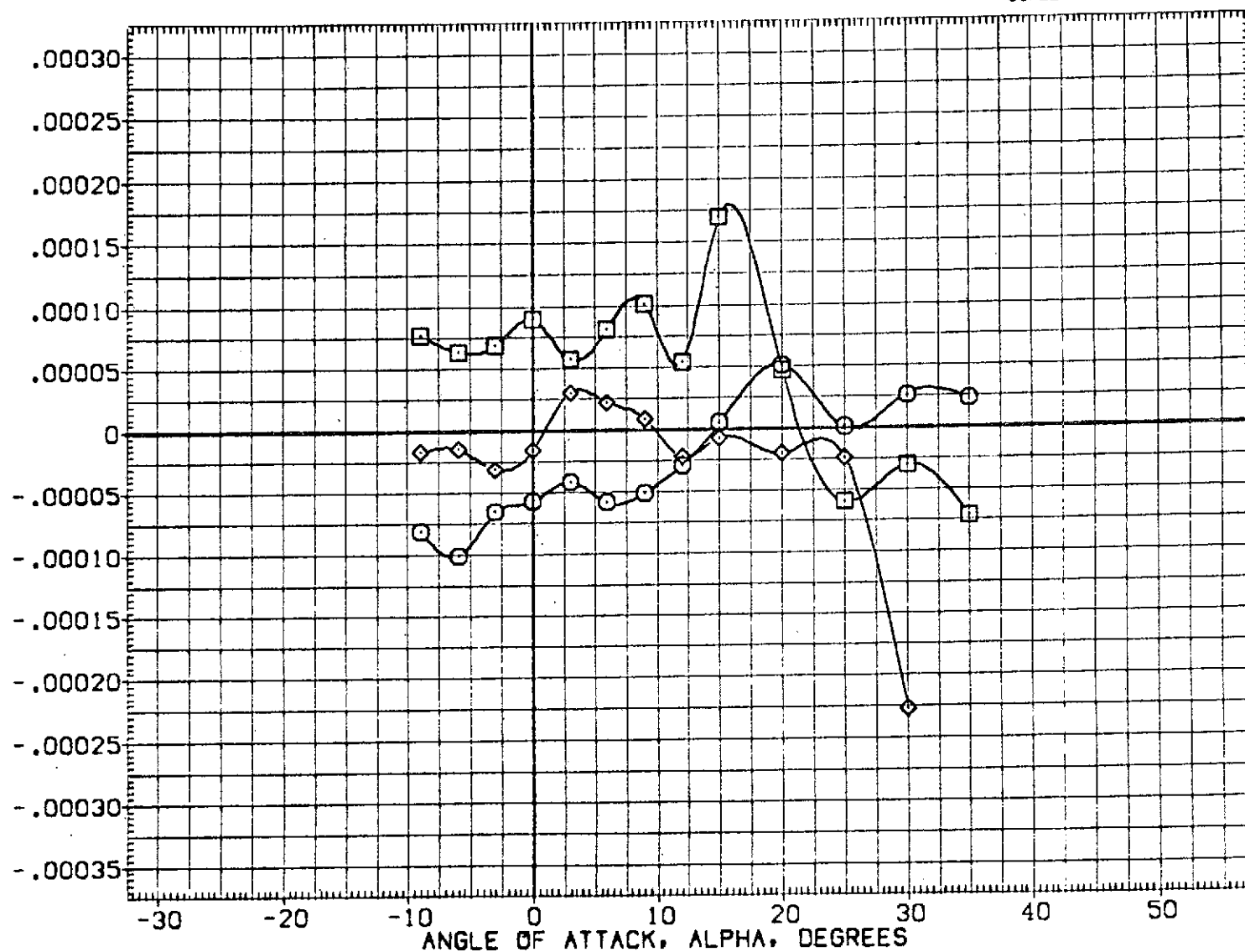


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125, \text{BETA}=0$

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PCRCS | REFERENCE INFORMATION | | |
|-----------------|---|---------|------|-------|-----------------------|-----------|--------|
| (AHLF09) | QAB2 CFHT113 MODEL 32-0 ORB V/NS2 RCS OFF | 125.000 | .850 | .000 | SREF | 2690.0000 | 50.FT. |
| (AHLF13) | QAB2 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 | IN. |
| (AHLF14) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 | IN. |
| | | | | | XMRP | 1076.7000 | IN. |
| | | | | | YMRP | .0000 | IN. |
| | | | | | ZMRP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

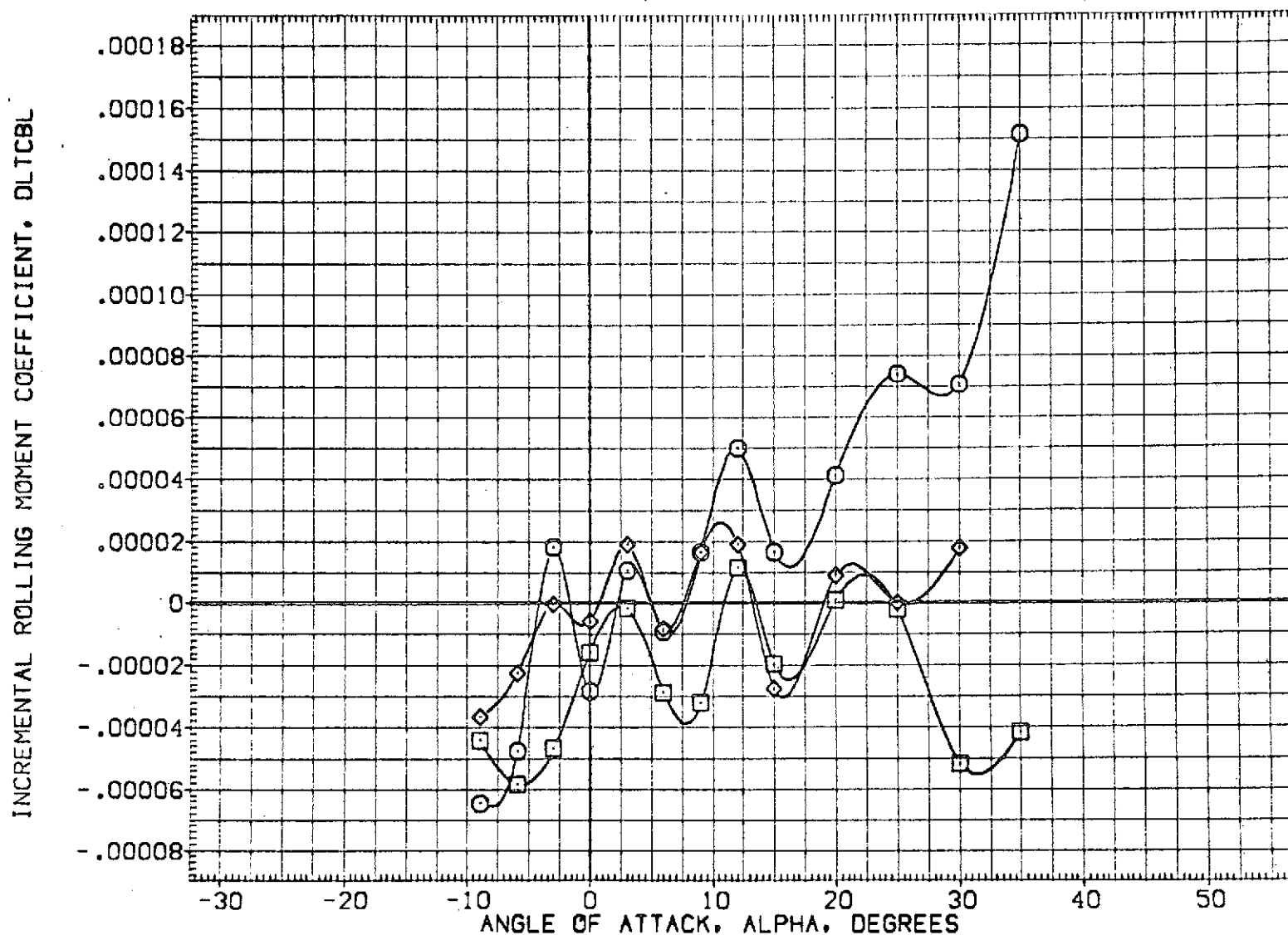


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125, \beta=0$

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RN/L | PCRC5 | REFERENCE INFORMATION | |
|-----------------|---|---------|------|-------|-----------------------|------------------|
| (AHLF09) | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 RCS OFF | 125.000 | .850 | .000 | SREF | 2690.0000 SQ.FT. |
| (AHLF13) | 0A82 CFHT113 MODEL 32-0 OR8 V/N80 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 IN. |
| (AHLF14) | 0A82 CFHT113 MODEL 32-0 OR8 V/N84 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 IN. |
| | | | | | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

INCREMENTAL NORMAL FORCE COEFFICIENT, CL_{INC}

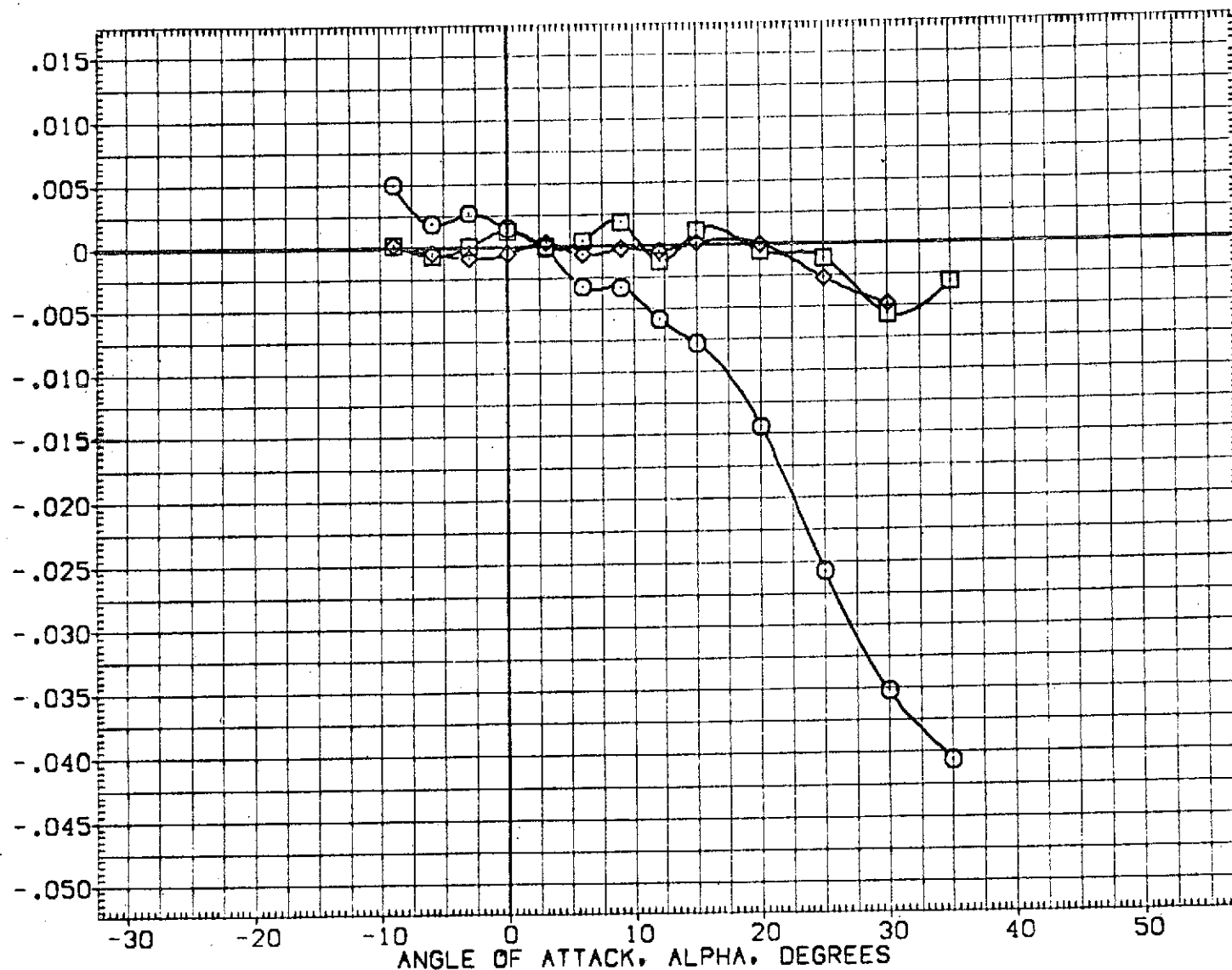


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125, \beta=0$

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RN/L | PCRC5 | REFERENCE INFORMATION |
|-----------------|---|---------|------|-------|-----------------------|
| [AHLF09] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 RCS OFF | 125.000 | .850 | .000 | SREF 2690.0000 SQ.FT. |
| [AHLF13] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .850 | .000 | LREF 474.8100 IN. |
| [AHLF14] | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 125.000 | .850 | .000 | BREF 936.6800 IN. |
| | | | | | XMRP 1076.7000 IN. |
| | | | | | YMRP .0000 IN. |
| | | | | | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

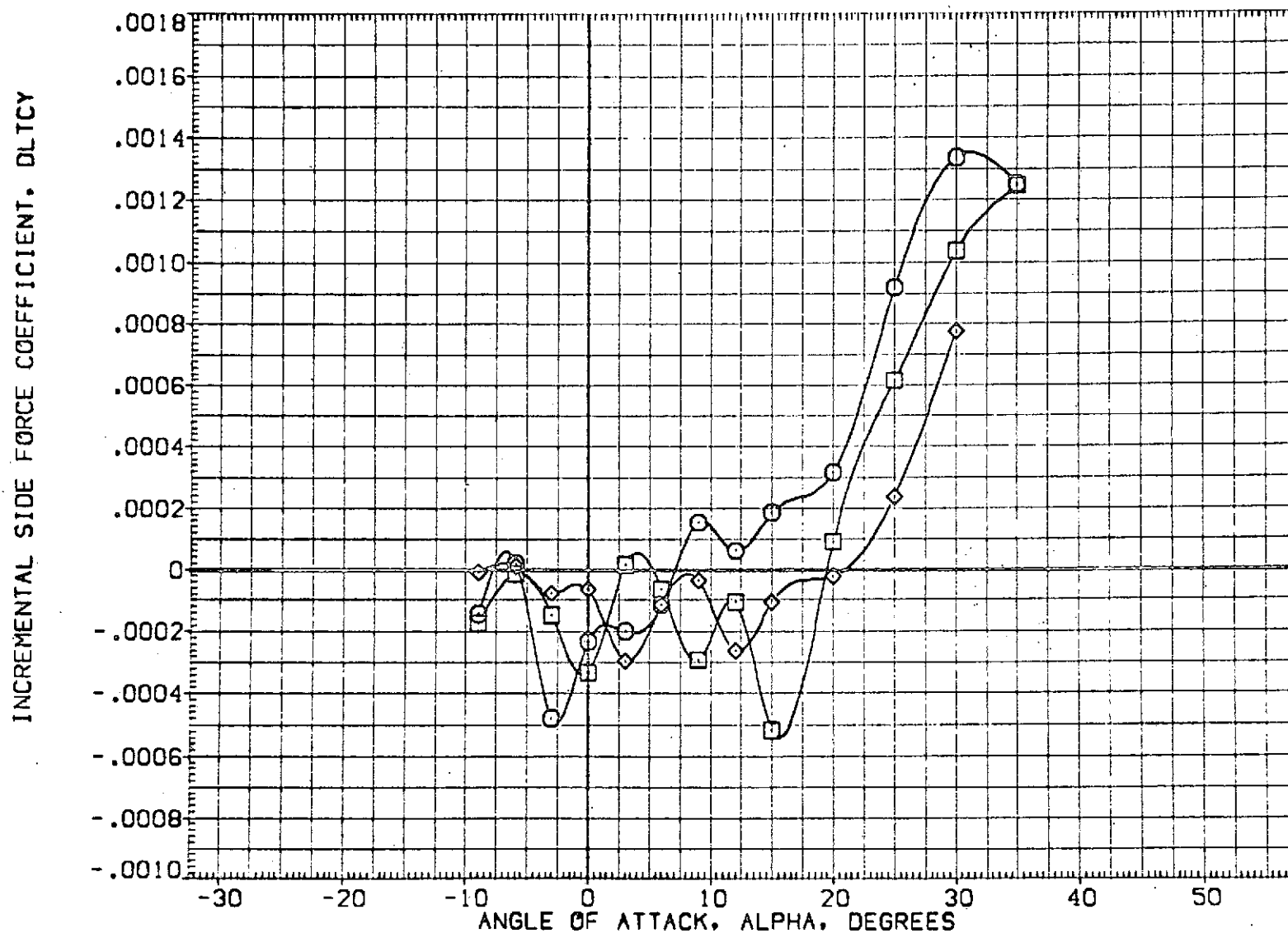


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125$, $\text{BETA}=0$
 (A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PCRCS | REFERENCE INFORMATION | |
|-----------------|---|---------|------|-------|-----------------------|------------------|
| (AHLF09) | GA82 CFHT113 MODEL 32-0 OR8 V/N52 RCS OFF | 125.000 | .850 | .000 | SREF | 2690.0000 SQ.FT. |
| (AHLF13) | GA82 CFHT113 MODEL 32-0 OR8 V/N80 RCS OFF | 125.000 | .850 | .000 | LREF | 474.8100 IN. |
| (AHLF14) | GA82 CFHT113 MODEL 32-0 OR8 V/N84 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 IN. |
| | | | | | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

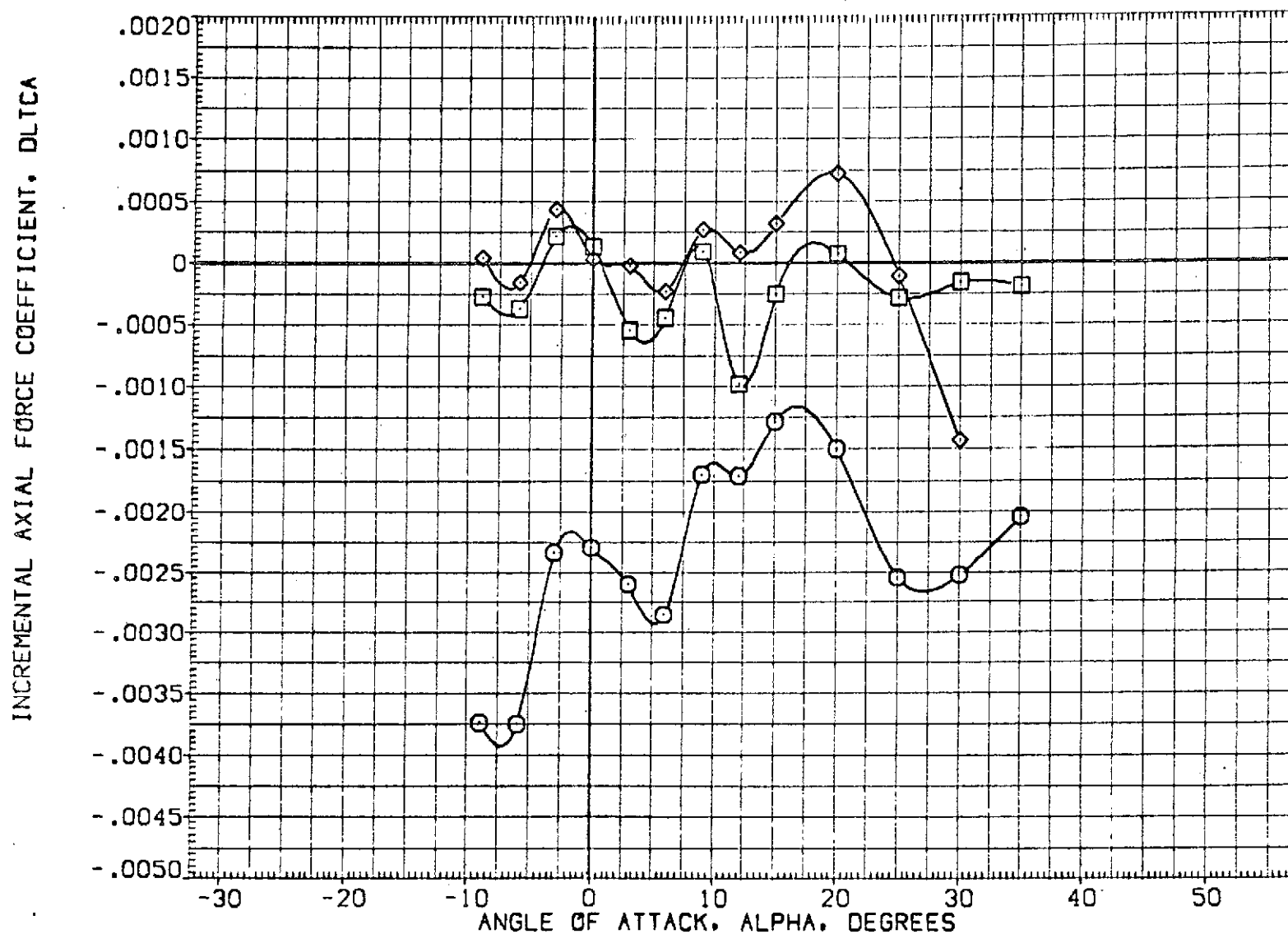


FIG. 02 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=125$, $\beta=0$

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RM/L | FORCS | REFERENCE INFORMATION |
|-----------------|---|---------|-------|-------|-----------------------|
| (RHLF00) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLF02) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | 1.000 | .000 | LREF 474.8100 IN. |
| | | | | | BREF 936.6800 IN. |
| | | | | | XMRP 1076.7000 IN. |
| | | | | | YMRP .0000 IN. |
| | | | | | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

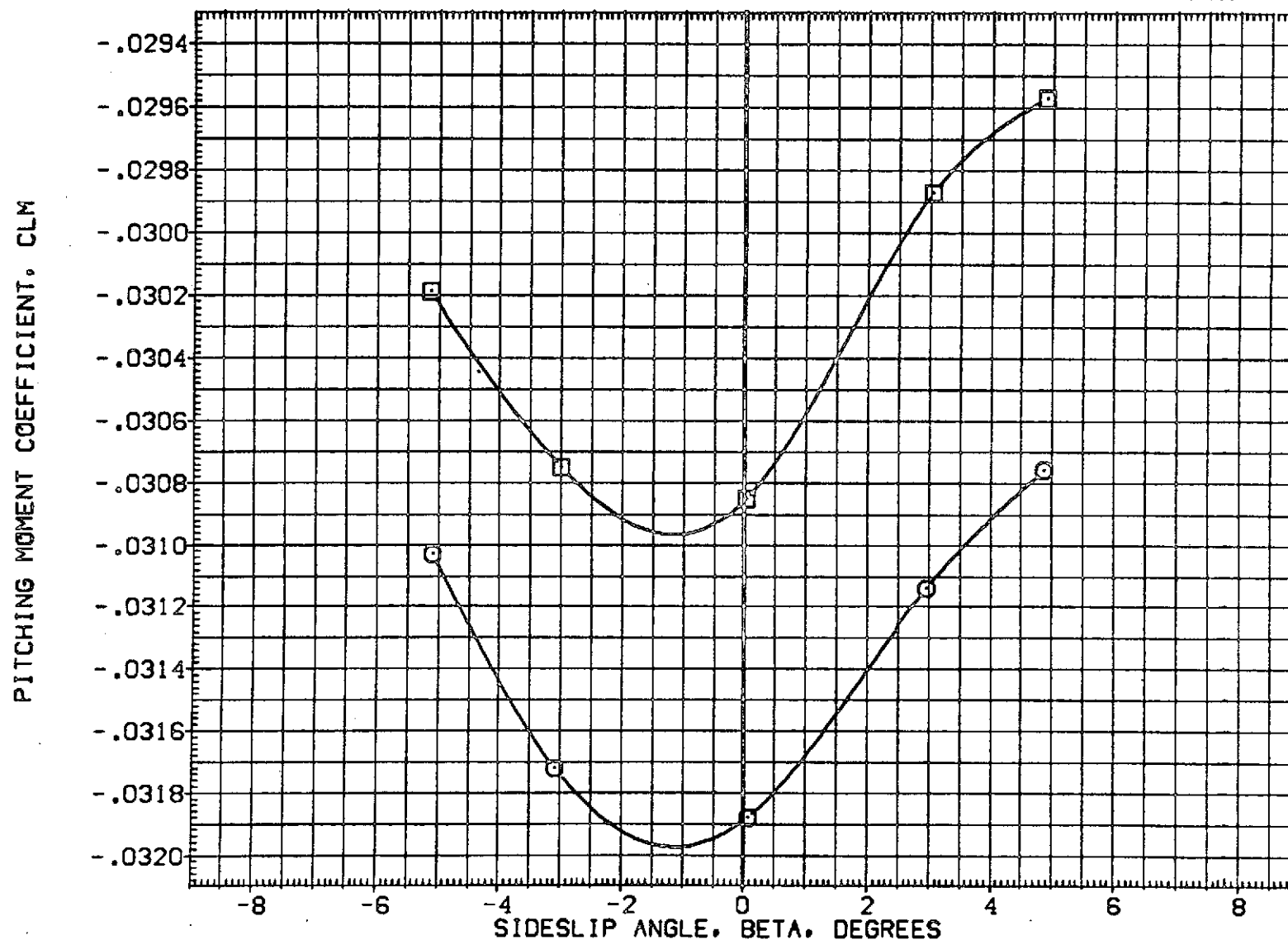




FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, ALPHA=0

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION

[RHLF00]  GAB2 CFHT113 MODEL 32-0 DRB V/N49 RCS OFF
 [RHLF02]  GAB2 CFHT113 MODEL 32-0 DRB V/N34 RCS OFF

Q(PSF) RN/L PCPCS
 150.000 1.000 .000
 150.000 1.000 .000

REFERENCE INFORMATION
 SREF 2880.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.8900 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0100

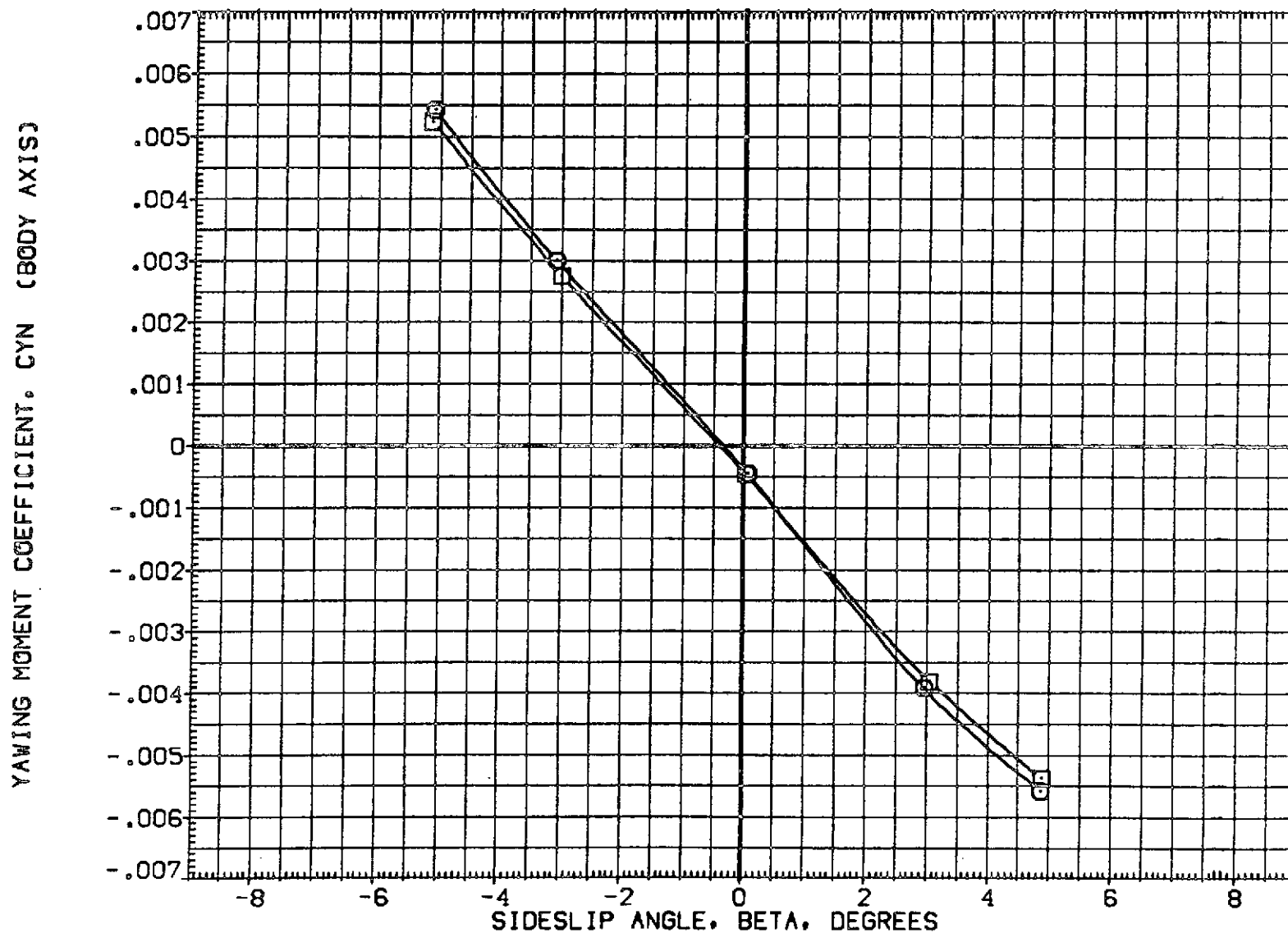


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \alpha=0$

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RHLF00) □ 0A82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF
 (RHLF02) □ 0A82 CFHT113 MODEL 32-0 GRB V/N84 RCS OFF

Q(PSF) RV/L PCRC
 150.000 1.000 .000
 150.000 1.000 .000

REFERENCE INFORMATION

SREF 2830.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0100

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

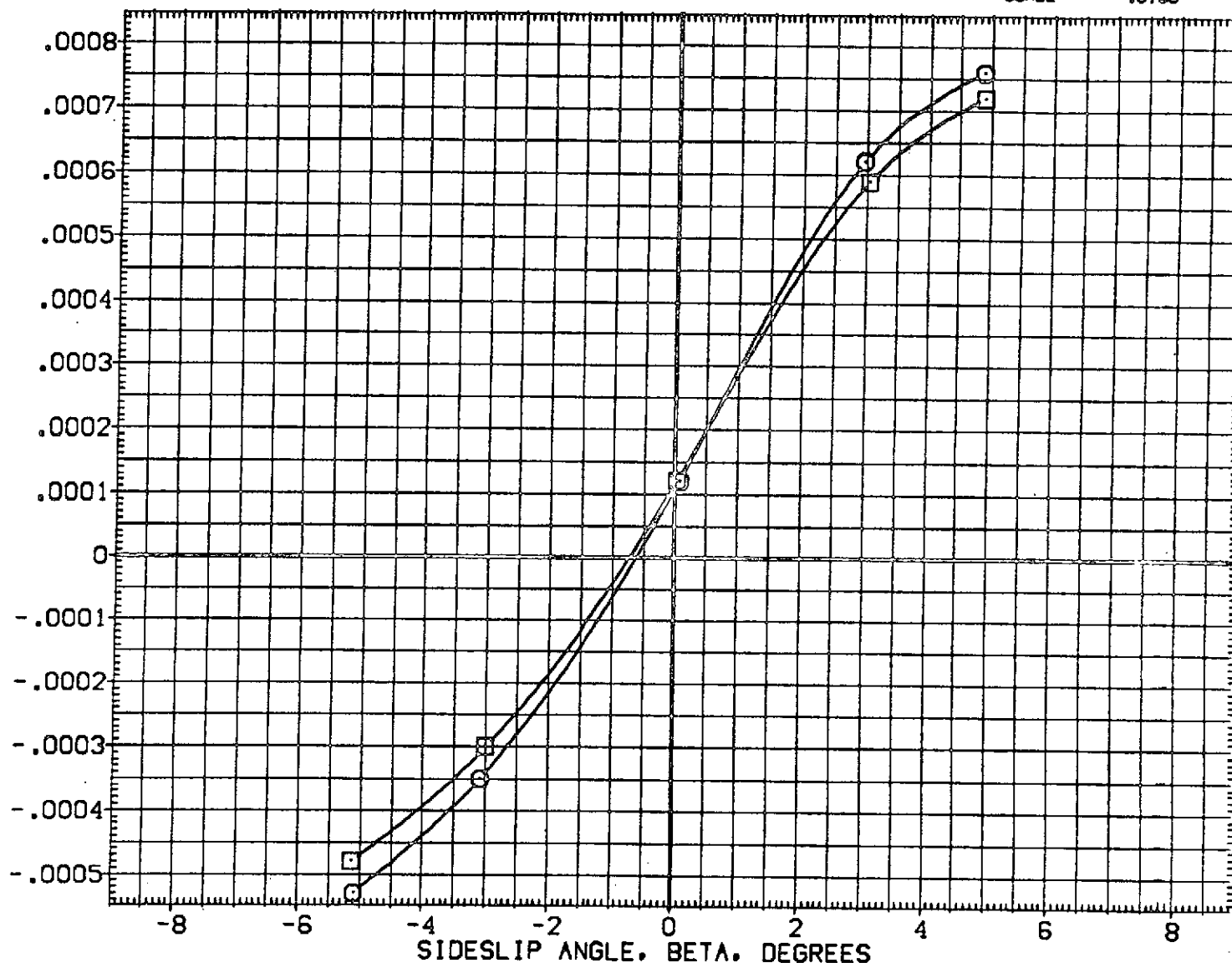


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, ALPHA=0

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RM/L | FORCS | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|-------|-----------------------|------------------|
| (RHLF00) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHLF02) | 0A82 CFHT113 MODEL 32-0 GR8 V/N84 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.8100 IN. |
| | | | | | BREF | 936.6800 IN. |
| | | | | | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

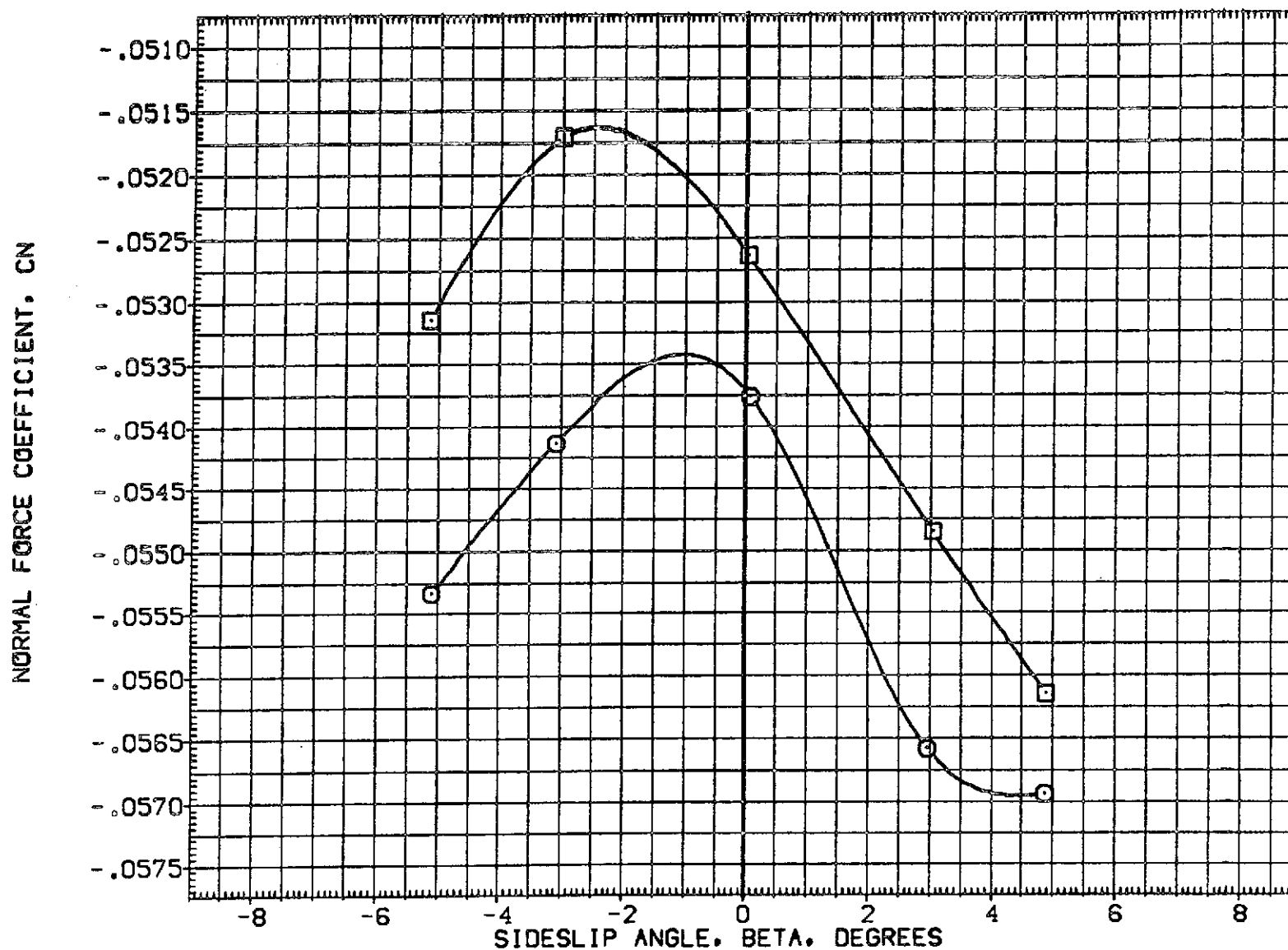


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, ALPHA=0
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PN/L | PCPCS | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|-------|-----------------------|------------------|
| [RHLF00] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHLF02] | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.8100 IN. |
| | | | | | BREF | 936.6800 IN. |
| | | | | | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

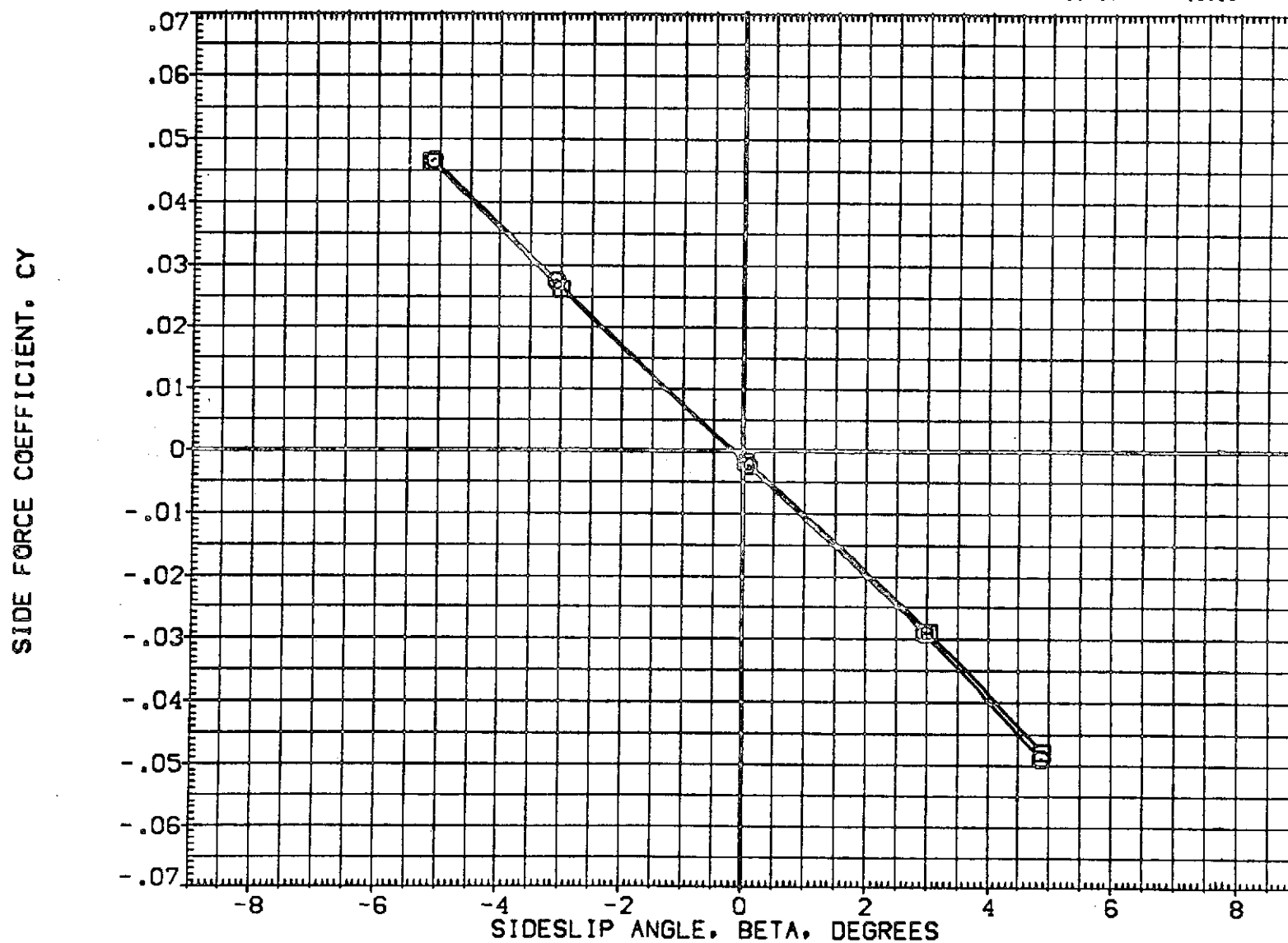


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, ALPHA=0

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | W/L | FORCS | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|-------|-----------------------|------------------|
| (RHLF00) ○ | 0A82 CFHT113 MODEL 32-0 DRB V/N49 RCS OFF | 150.000 | 1.000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHLF02) □ | 0A82 CFHT113 MODEL 32-0 DRB V/N84 RCS OFF | 150.000 | 1.000 | .000 | LREF | 474.8100 IN. |
| | | | | | BREF | 938.6900 IN. |
| | | | | | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

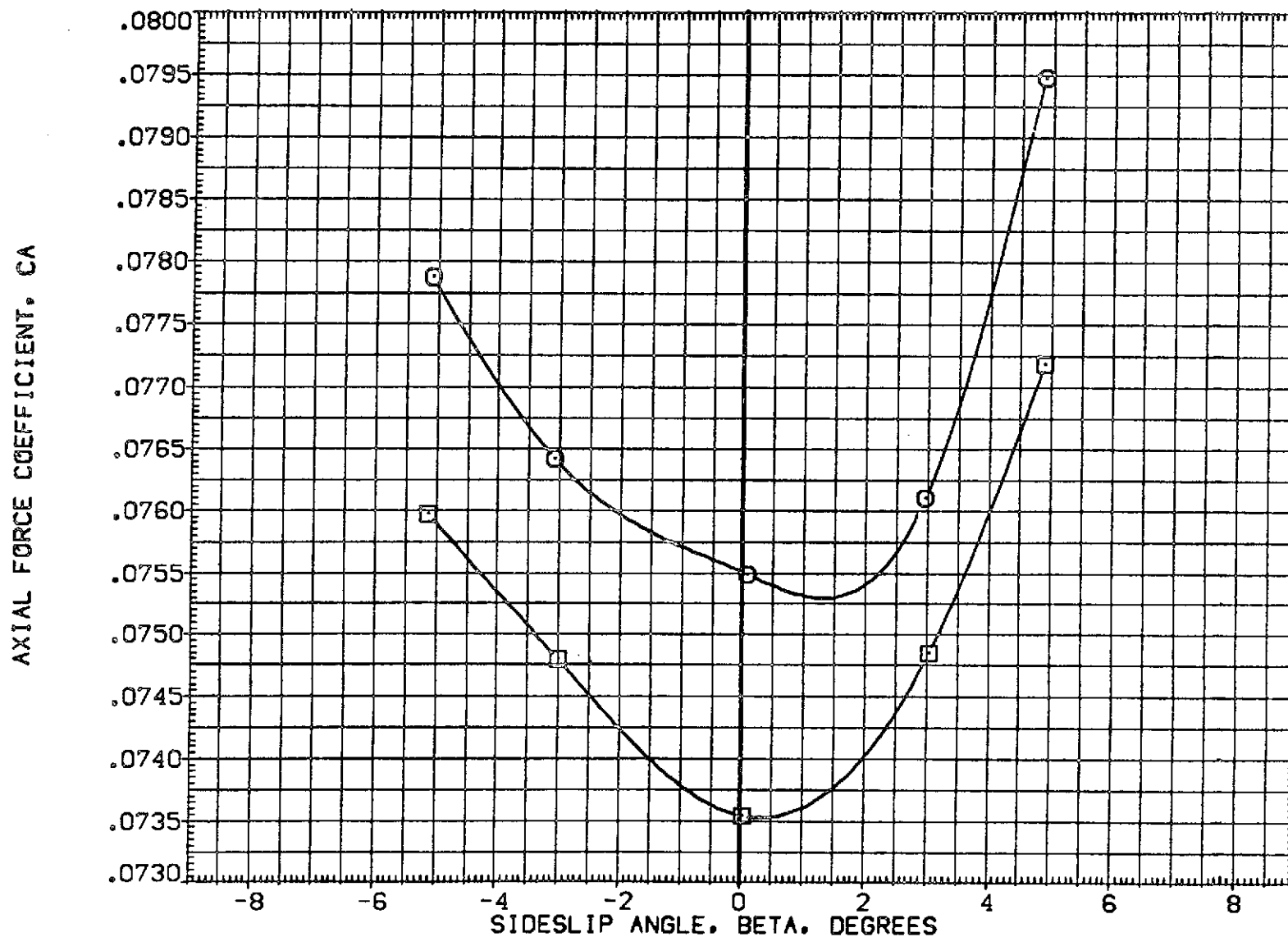


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \alpha=0$

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AHLF02) O OAS2 CFHT113 MODEL 32-0 ORB V/NS4 RCS OFF

Q(PSF) RN/L PCPCS
 150.000 1.000 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0100

INCREMENTAL PITCHING MOMENT COEFFICIENT, ΔC_{LM}

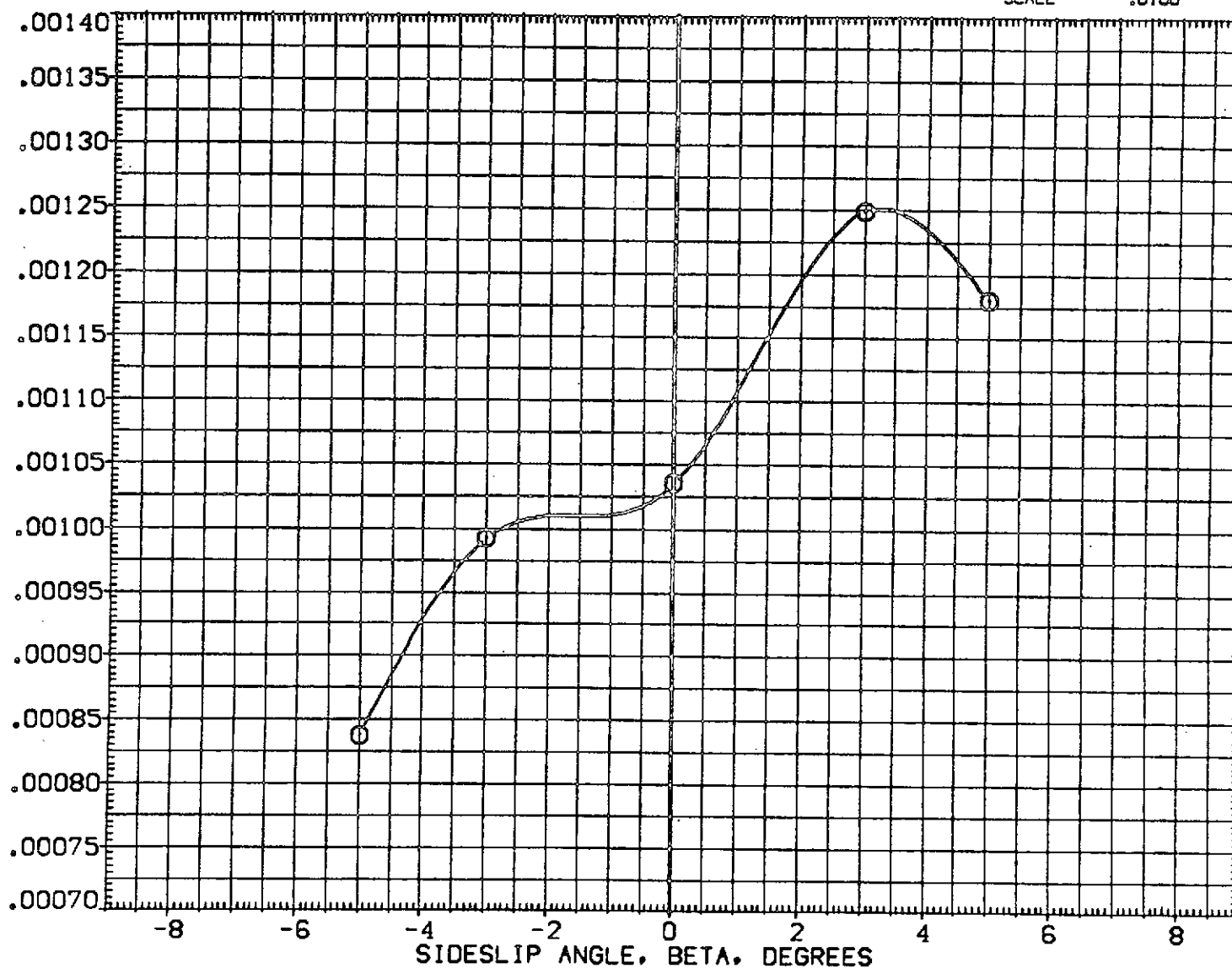


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \alpha=0$
 (A)MACH = 10.30

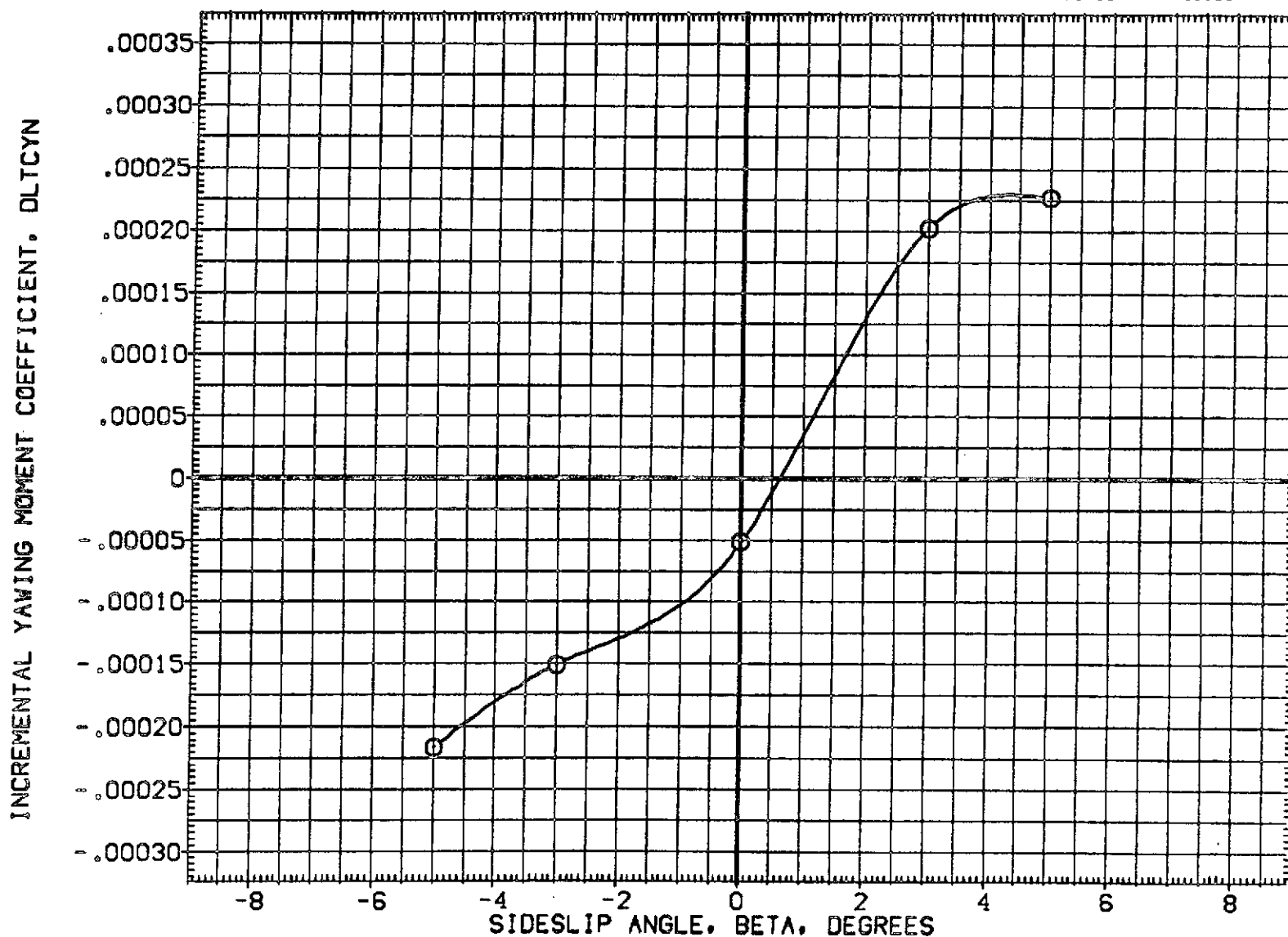


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(PSF)=150, \alpha=0$

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(AHLF02) ○ DAB2 CFHT113 MODEL 32-9 CRB V/NB4 RCS OFF

Q(PSF) 150.000
RN/L 1.000
PCPCS .000

REFERENCE INFORMATION
SREF 2690.0000 SQ.FT.
LREF 474.8100 IN.
BREF 936.6800 IN.
XMRP 1076.7000 IN.
YMRP .0000 IN.
ZMRP 375.0000 IN.
SCALE .0100

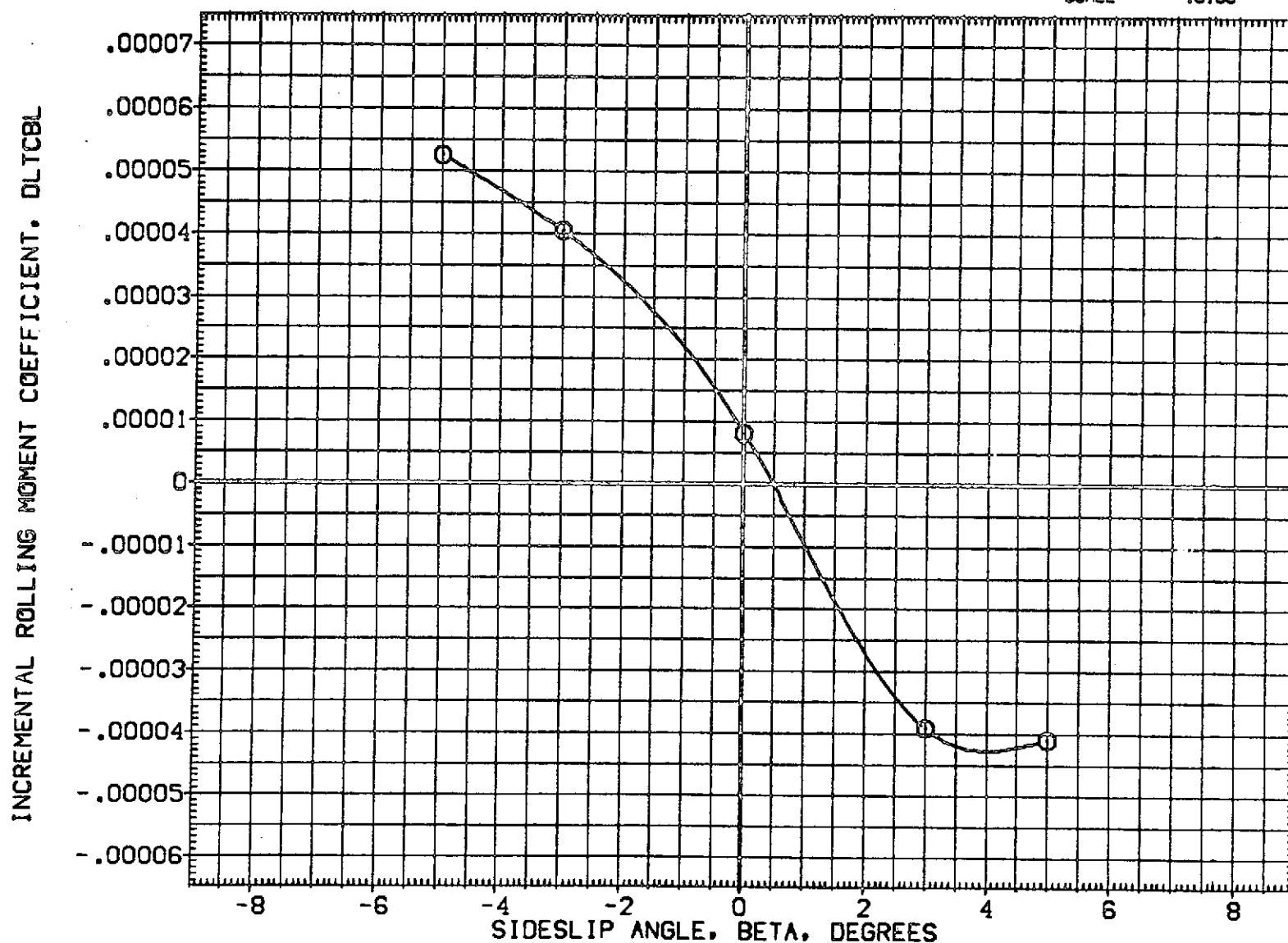


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \alpha=0$

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AHLFD2) ○ GA82 CFHT113 MODEL 32-0 GRB W/N34 RCS OFF

Q(PSF) AN/L PCRS
 150.000 1.000 .000

REFERENCE INFORMATION
 SREF 2650.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0100

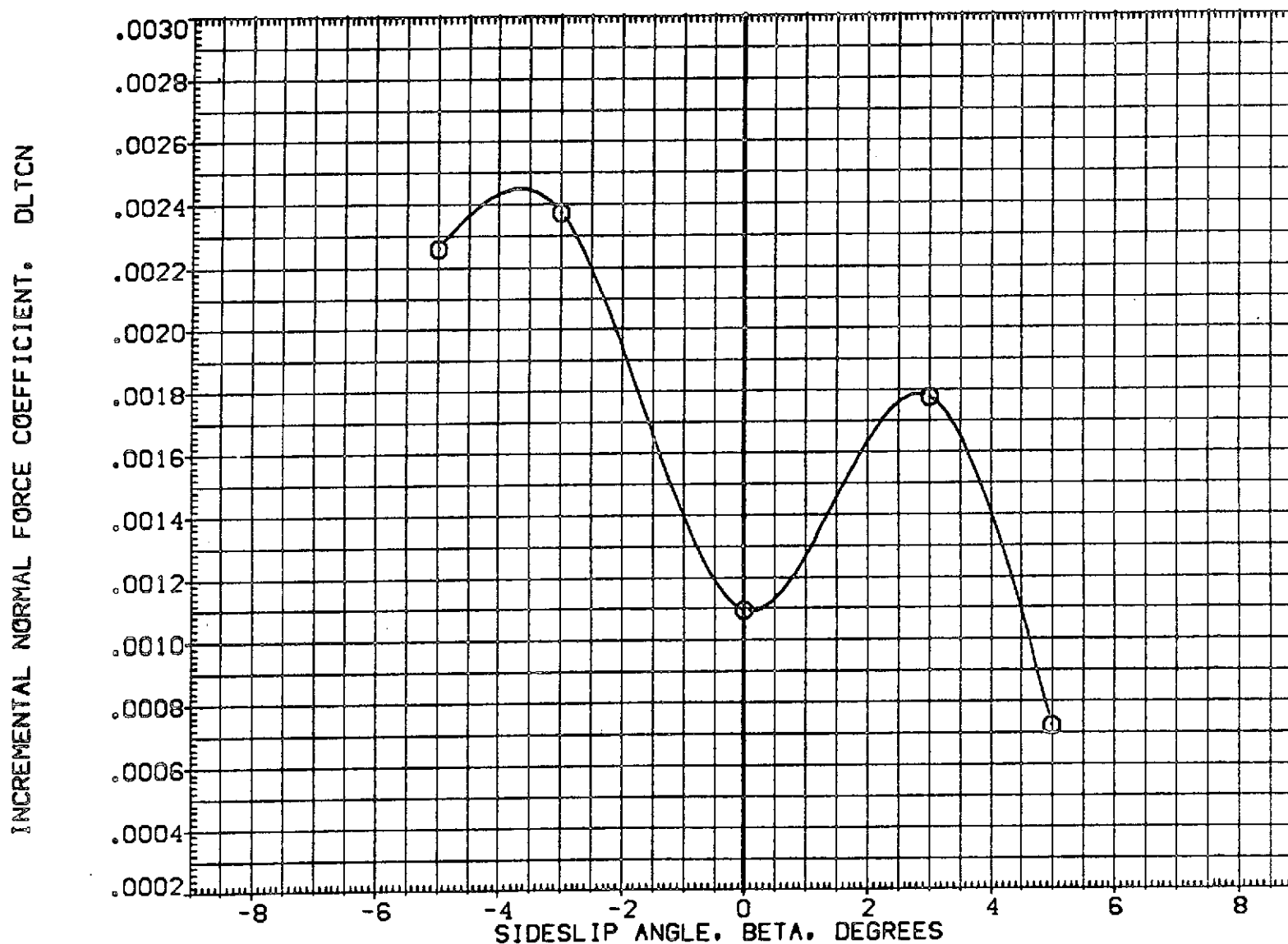


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, $Q(\text{PSF})=150, \alpha=0$

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AHLF02) ○ GA82 CFHT113 MODEL 32-0 CRB V/N84 RCS OFF

Q(PSF) RN/L PCRC
 150.000 1.000 .000

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0100

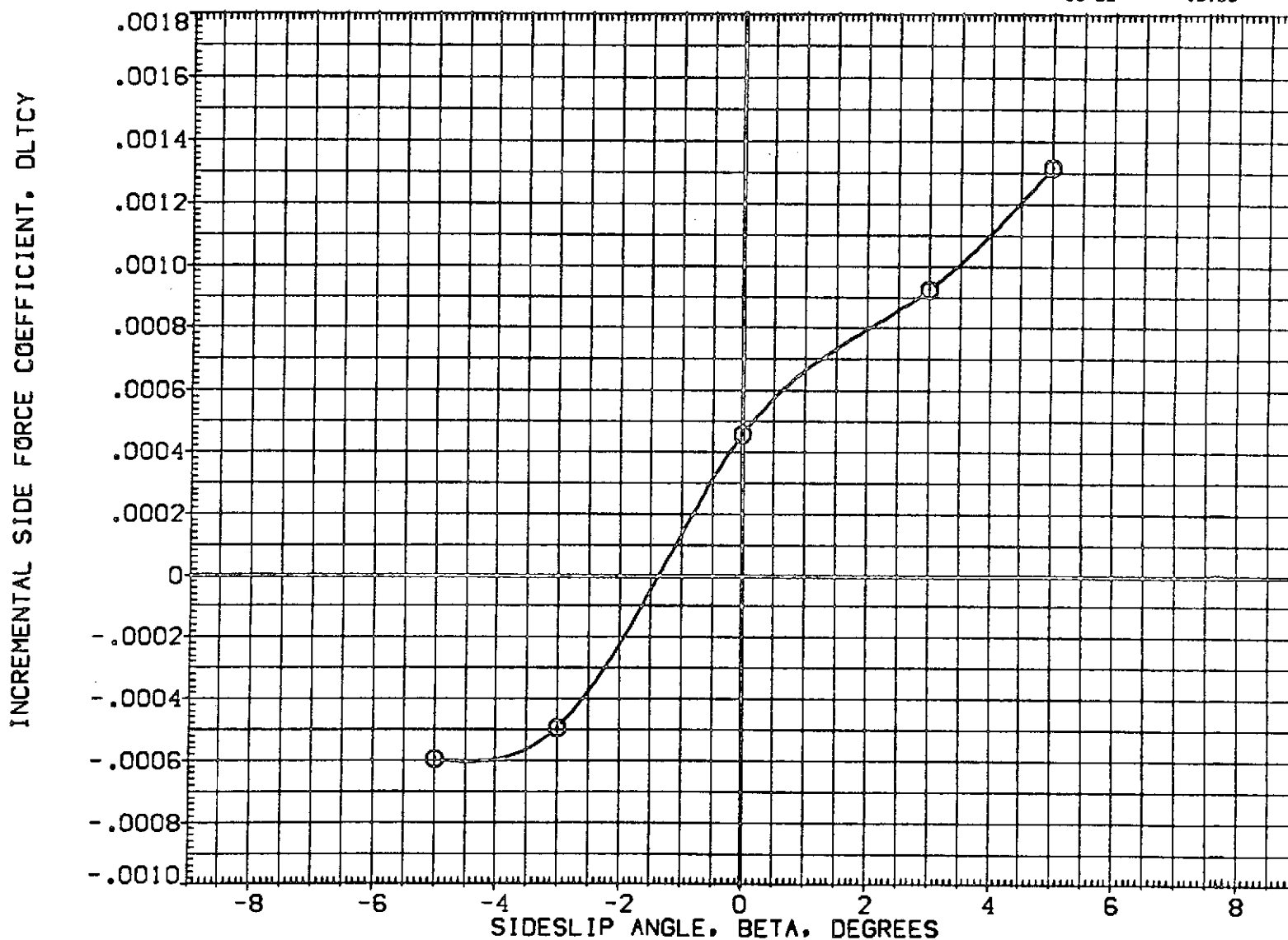


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, ALPHA=0

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (AHLF02) O QAG2 CFHT113 MODEL 32-0 GRB V/N34 RCS OFF

Q(PSF) 150.000
 R/V/L 1.000
 PCRS .000

REFERENCE INFORMATION
 SREF 2690.0000 90.FT.
 LREF 474.8100 IN.
 BREF 936.6600 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0100

INCREMENTAL AXIAL FORCE COEFFICIENT, DLICA

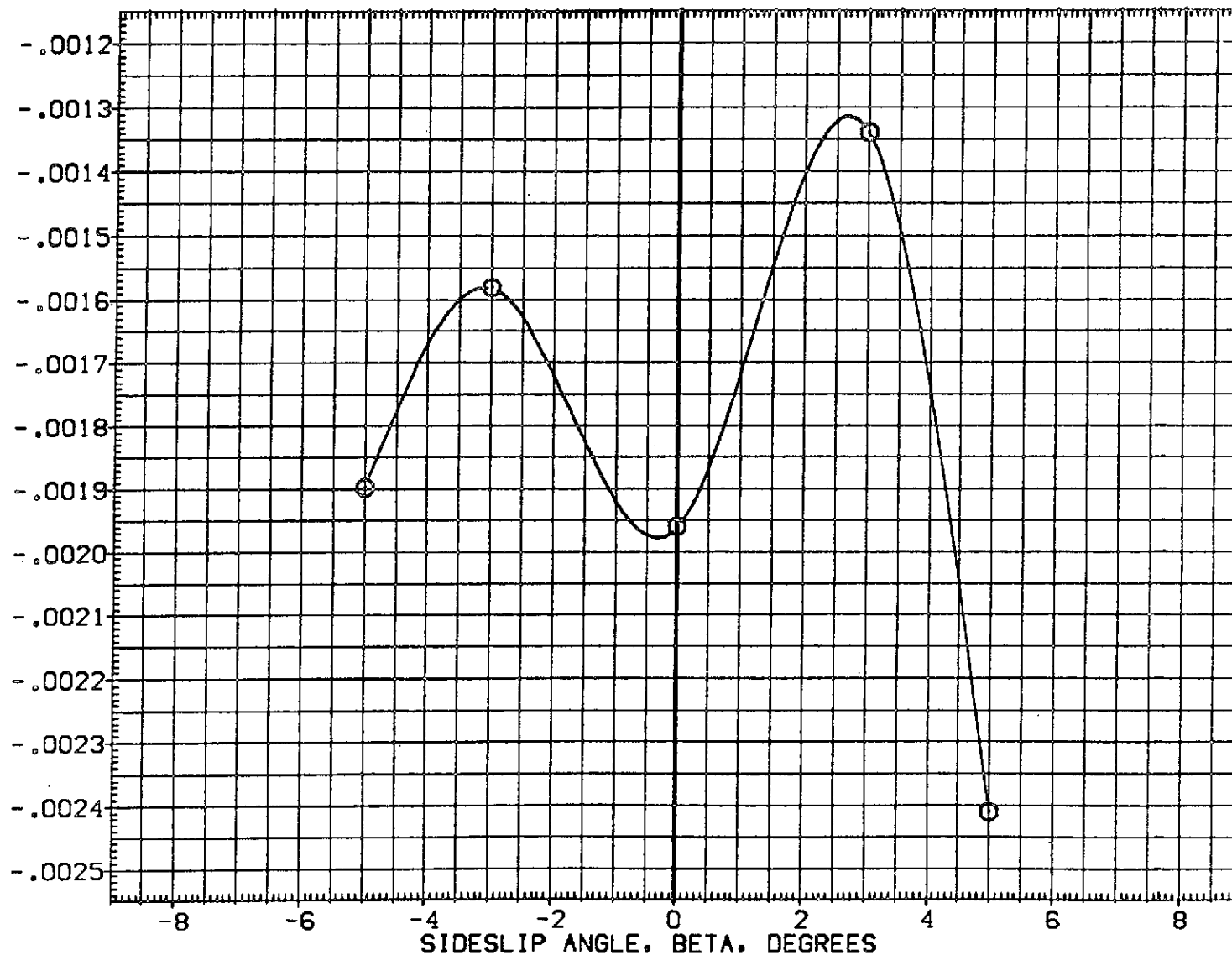


FIG. 03 REPEATABILITY OF JET-OFF AERO CHARACTERISTICS, Q(PSF)=150, ALPHA=0

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | Re/L | PCRCs | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|-------|-----------------------|-----------|--------|
| [RHLF07] | DA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 | sq.ft. |
| [RHLF06] | DA82 CFHT113 MODEL 32-0 GR8 V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 | IN. |
| [RHLF05] | DA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 | IN. |
| [RHLF04] | DA82 CFHT113 MODEL 32-0 GR8 V/N85 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 | IN. |
| [RHLF08] | DA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 200.000 | 1.350 | .000 | YMRP | .0000 | IN. |
| | | | | | ZMRP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

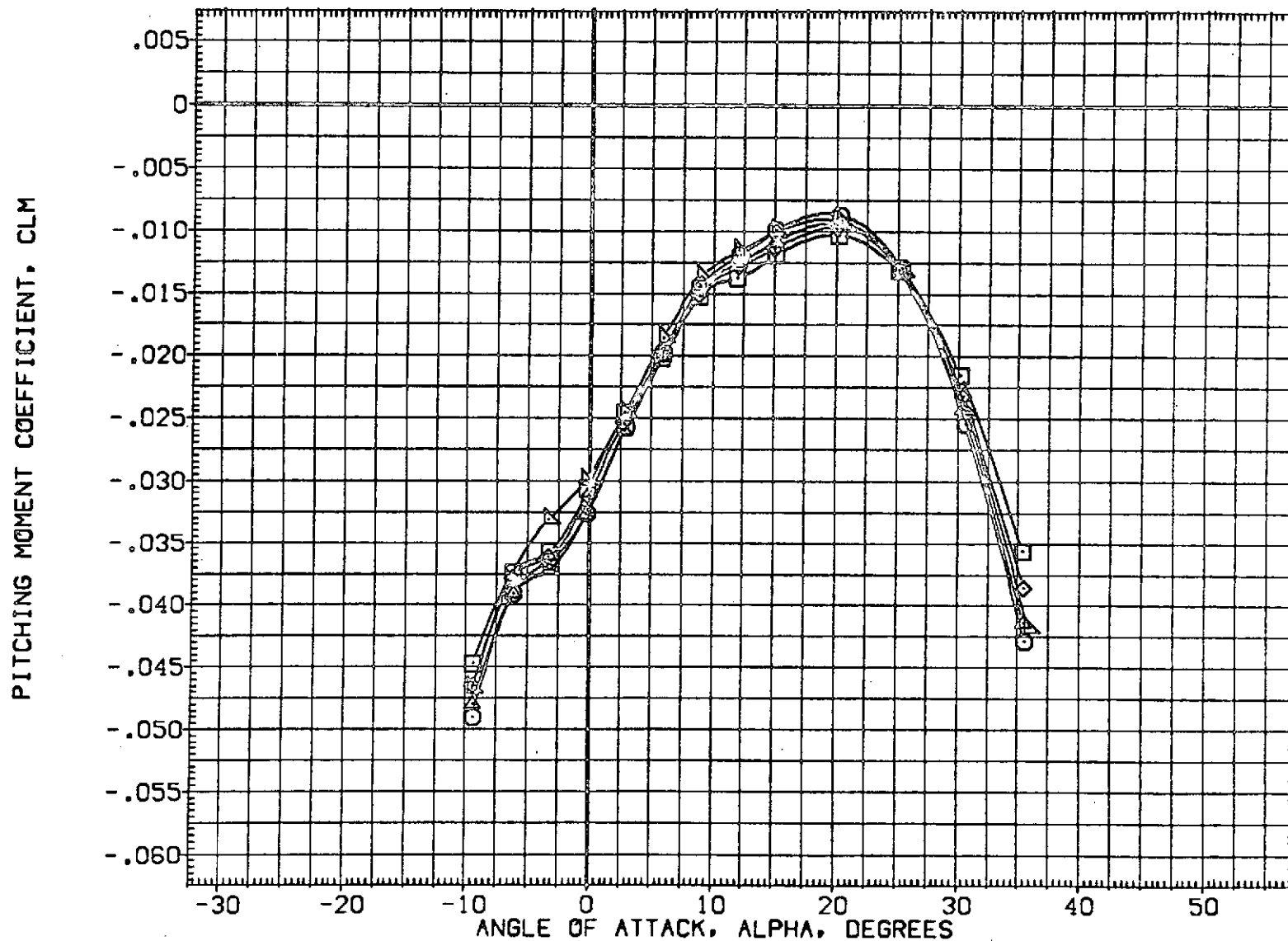


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RN/L | PC RCS | REFERENCE INFORMATION |
|-----------------|---|---------|-------|--------|-----------------------|
| [RHLF07] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF 2690.0000 SQ.FT. |
| [RHLF06] | QAB2 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF 474.3100 IN. |
| [RHLF05] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | BREF 936.6800 IN. |
| [RHLF04] | QAB2 CFHT113 MODEL 32-0 ORB V/N35 RCS OFF | 150.000 | 1.000 | .000 | XMRP 1076.7000 IN. |
| [RHLF08] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | 1.350 | .000 | YMRP .0000 IN. |
| | | | | | ZMRP 375.0000 IN. |
| | | | | | SCALE .0100 |

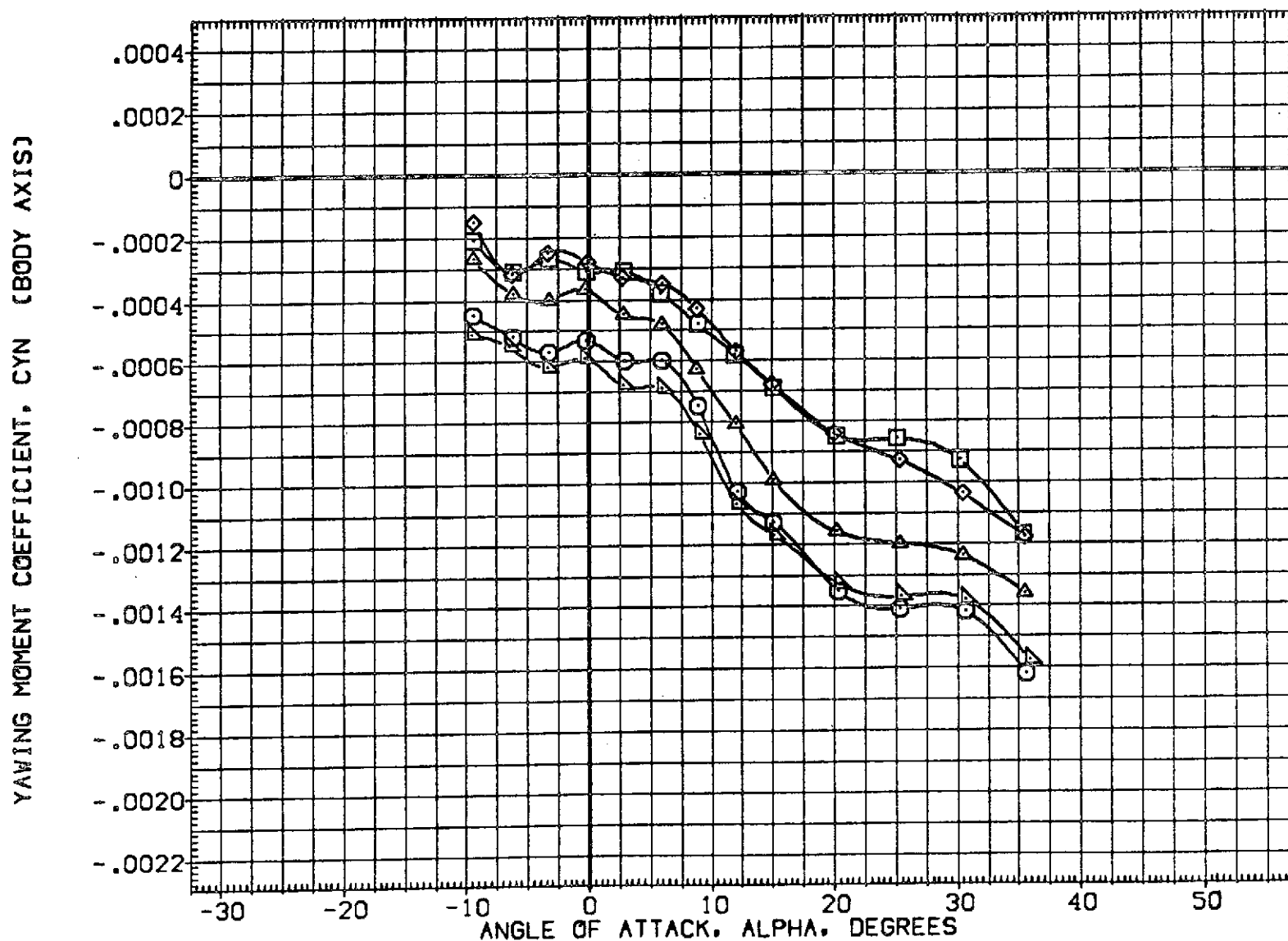


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | Re/L | PCRC | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|------|-----------------------|-----------|---------|
| [RHLF07] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 | 50. FT. |
| [RHLF06] | QAB2 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 | IN. |
| [RHLF05] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | SREF | 935.6800 | IN. |
| [RHLF04] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 1.000 | .000 | XMWP | 1076.7000 | IN. |
| [RHLF08] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | 1.350 | .000 | YMWP | .0000 | IN. |
| | | | | | ZMWP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

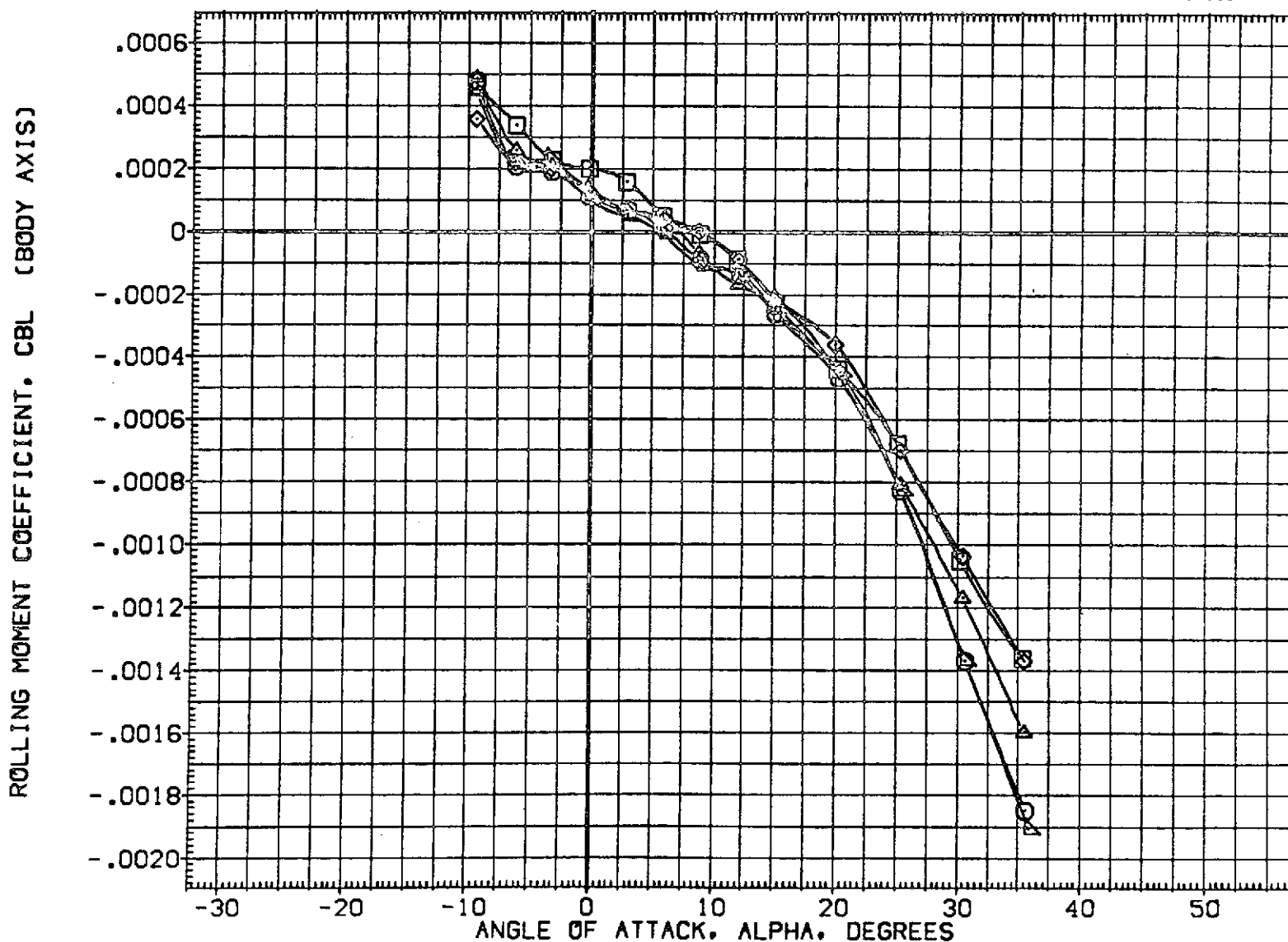


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RN/L | PCRS | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|------|-----------------------|------------------|
| (RHLF07) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 50.FT. |
| (RHLF06) | QAB2 CFHT113 MODEL 32-0 GRB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 IN. |
| (RHLF05) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 125.000 | .850 | .000 | GREF | 938.6800 IN. |
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 IN. |
| (RHLF08) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 200.000 | 1.350 | .000 | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

NORMAL FORCE COEFFICIENT, CN

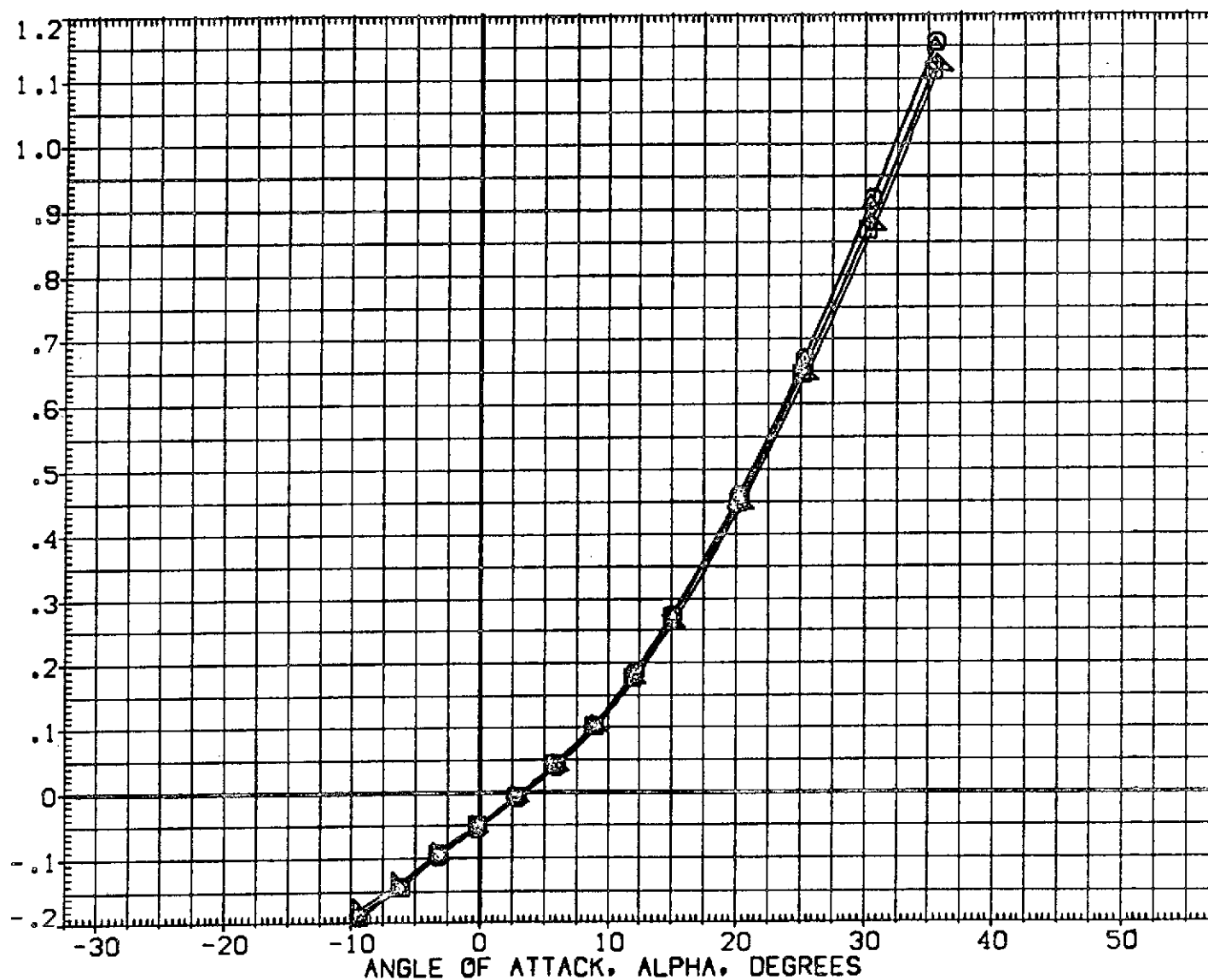


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RN/L | PC RCS | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|--------|-----------------------|-----------|---------|
| (R1LF07) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 | 50. FT. |
| (R1LF06) | QAB2 CFHT113 MODEL 32-0 GRB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 | IN. |
| (R1LF05) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 | IN. |
| (R1LF04) | QAB2 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | 1.000 | .000 | XMRF | 1076.7000 | IN. |
| (R1LF08) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 200.000 | 1.350 | .000 | YMRF | .0000 | IN. |
| | | | | | ZMRF | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

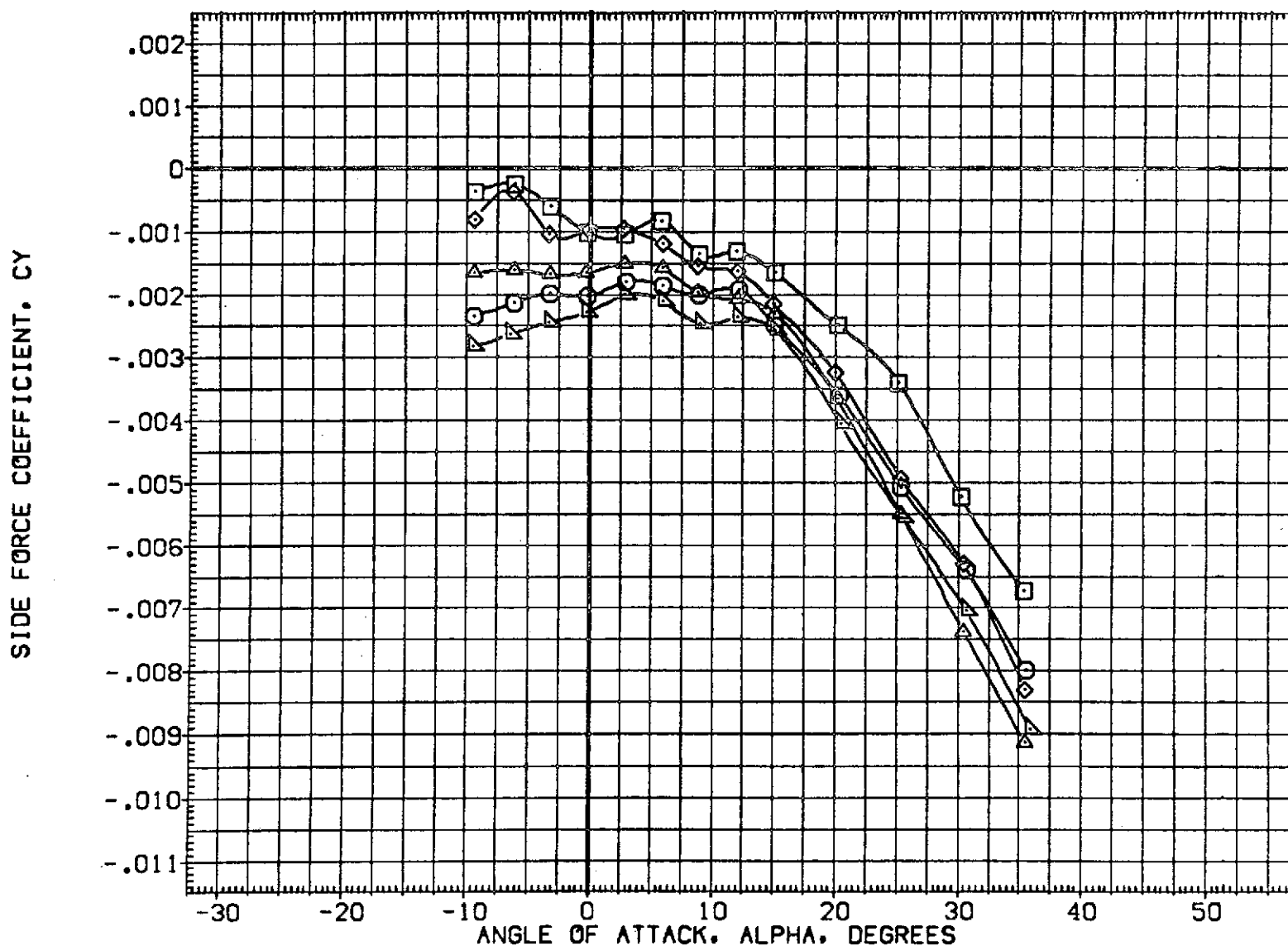


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | BN/L | PCRS | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|------|-----------------------|------------------|
| (RHLF07) | DA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHLF06) | DA82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 IN. |
| (RHLF05) | DA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .650 | .000 | BREF | 936.6600 IN. |
| (RHLF04) | DA82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 1.000 | .000 | XMRP | 1076.7000 IN. |
| (RHLF08) | DA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | 1.350 | .000 | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

AXIAL FORCE COEFFICIENT, CA

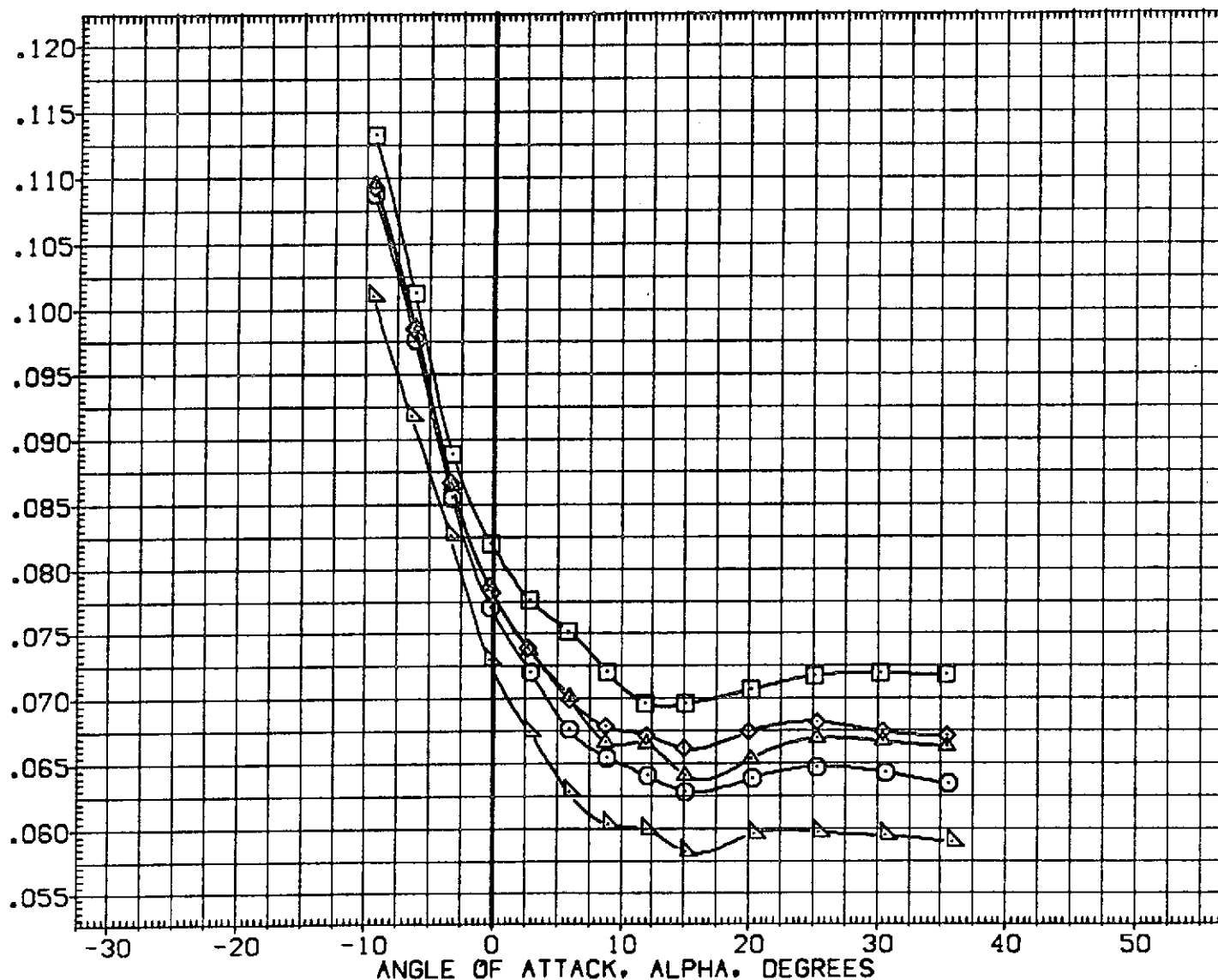


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | Re/L | PCRCs | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|-------|-----------------------|------------------|
| [AHLF07] | QAB2 CFHT113 MODEL 32-0 CRB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 SQ.FT. |
| [AHLF06] | QAB2 CFHT113 MODEL 32-0 CRB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 IN. |
| [AHLF05] | QAB2 CFHT113 MODEL 32-0 CRB V/N49 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 IN. |
| [AHLF08] | QAB2 CFHT113 MODEL 32-0 CRB V/N49 RCS OFF | 200.000 | 1.350 | .000 | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

INCREMENTAL PITCHING MOMENT COEFFICIENT, DLICLM

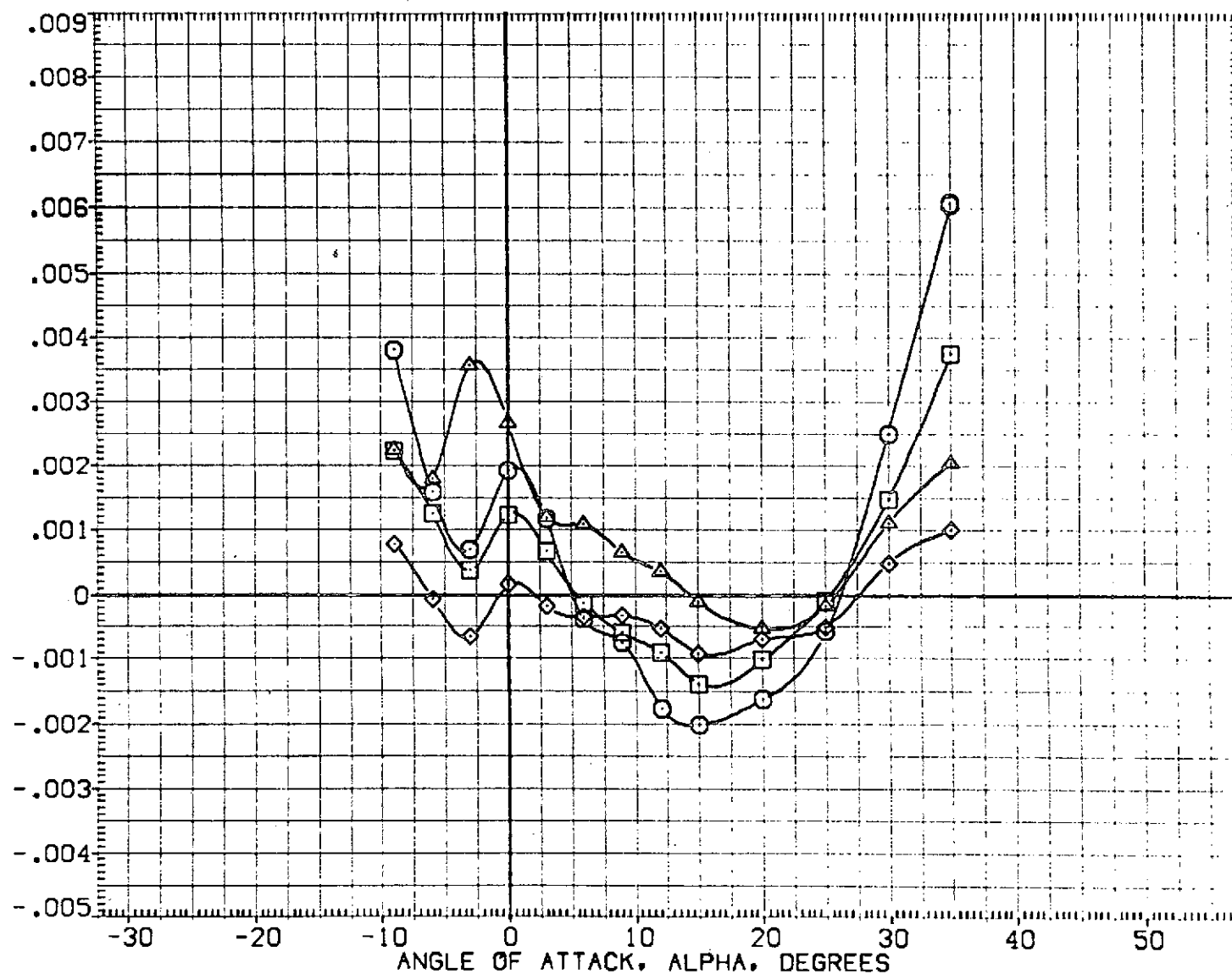


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PCPCS | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|-------|-----------------------|------------------|
| (AHLF07) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 SQ.FT. |
| (AHLF06) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 IN. |
| (AHLF05) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | BREF | 935.6800 IN. |
| (AHLF08) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | 1.350 | .000 | XMPP | 1076.7000 IN. |
| | | | | | YMPP | .0000 IN. |
| | | | | | ZMPP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

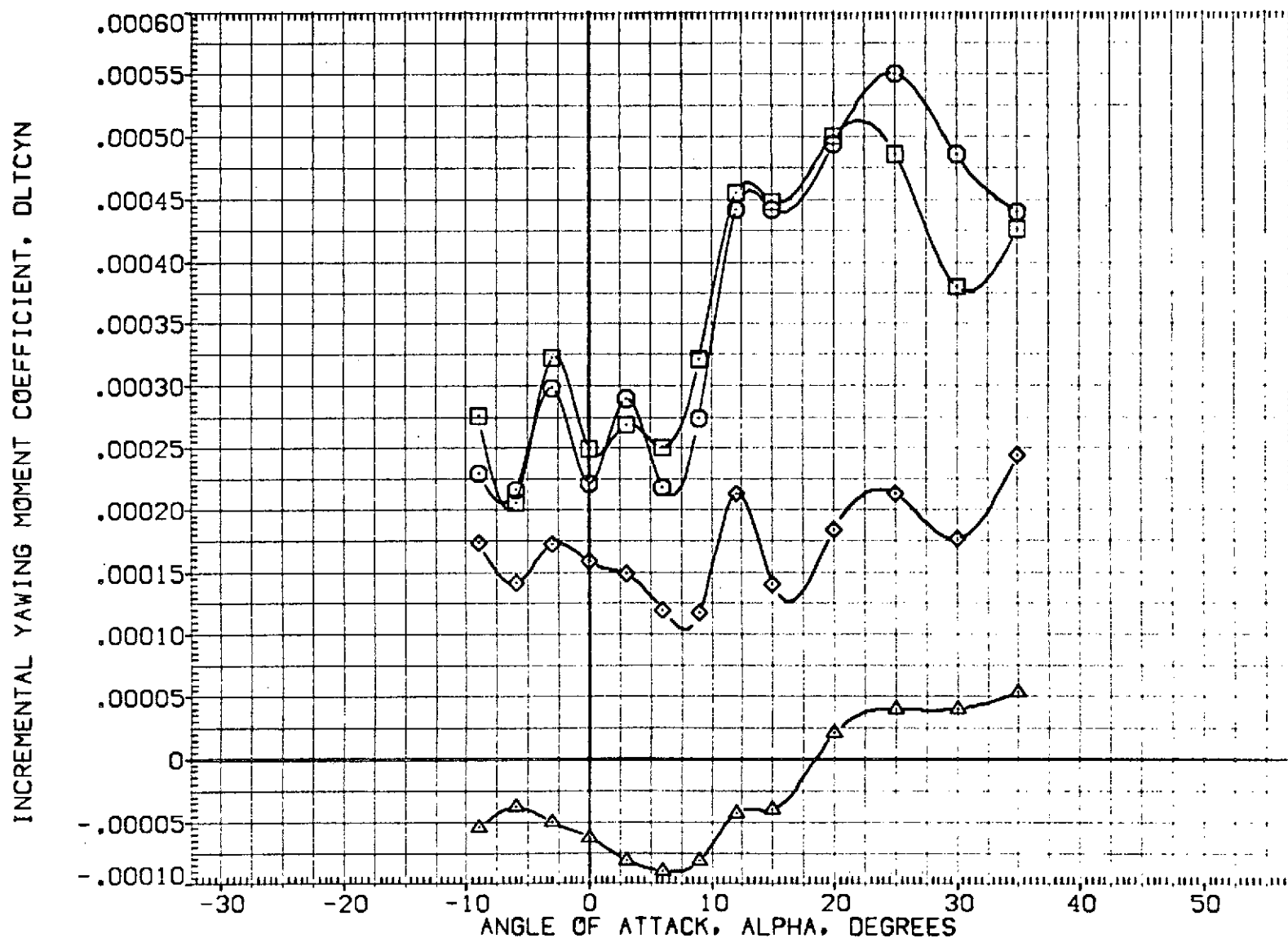


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RN/L | PCRC | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|------|-----------------------|------------------|
| (AHLF07) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 SQ.FT. |
| (AHLF06) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 IN. |
| (AHLF05) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 IN. |
| (AHLF08) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | 1.350 | .000 | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

INCREMENTAL ROLLING MOMENT COEFFICIENT, DLTCBL

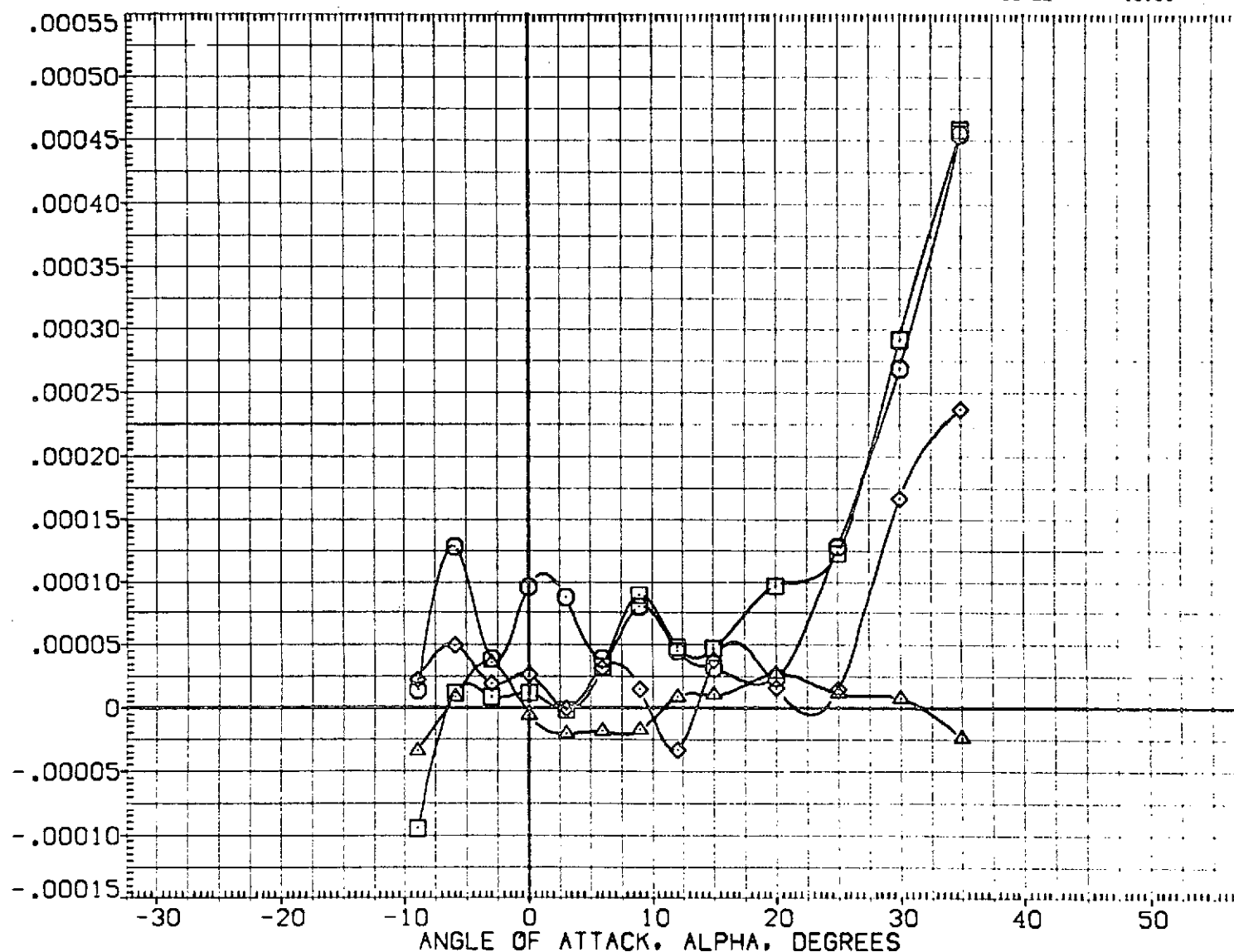


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RN/L | PCPCS | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|-------|-----------------------|-----------|---------|
| (AHLF07) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 | 50. FT. |
| (AHLF06) | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 | IN. |
| (AHLF05) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 | IN. |
| (AHLF08) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 RCS OFF | 200.000 | 1.350 | .000 | XMRP | 1076.7000 | IN. |
| | | | | | YMRP | .0000 | IN. |
| | | | | | ZMRP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

INCREMENTAL NORMAL FORCE COEFFICIENT, DL_{CN}

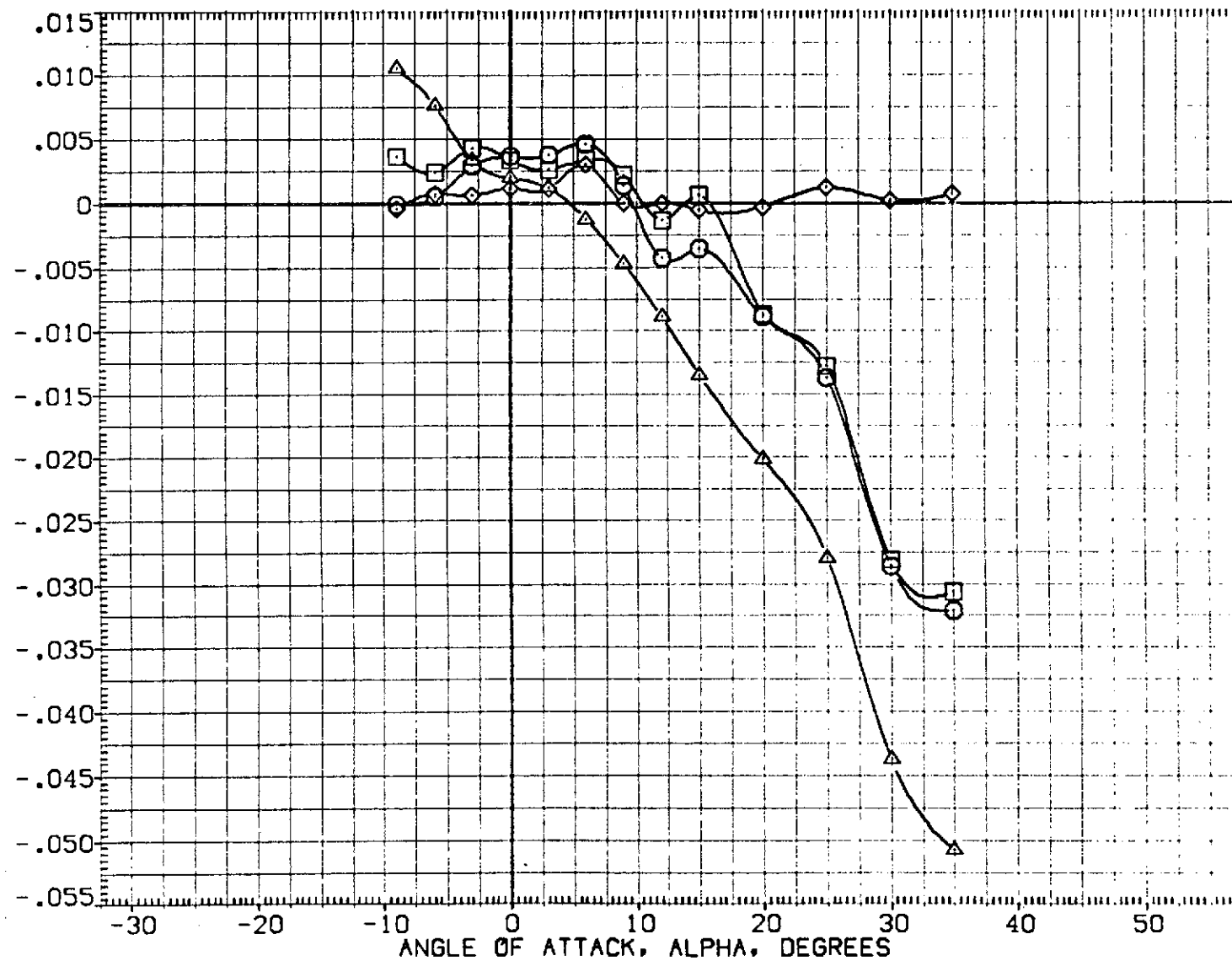


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | RN/L | PCRCs | REFERENCE INFORMATION | | |
|-----------------|---|---------|-------|-------|-----------------------|-----------|---------|
| [AHLF07] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 | 50. FT. |
| [AHLF06] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 | IN. |
| [AHLF05] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | BREF | 936.6800 | IN. |
| [AHLF08] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | 1.350 | .000 | XMRP | 1076.7000 | IN. |
| | | | | | YMRP | .0000 | IN. |
| | | | | | ZMRP | 375.0000 | IN. |
| | | | | | SCALE | .0100 | |

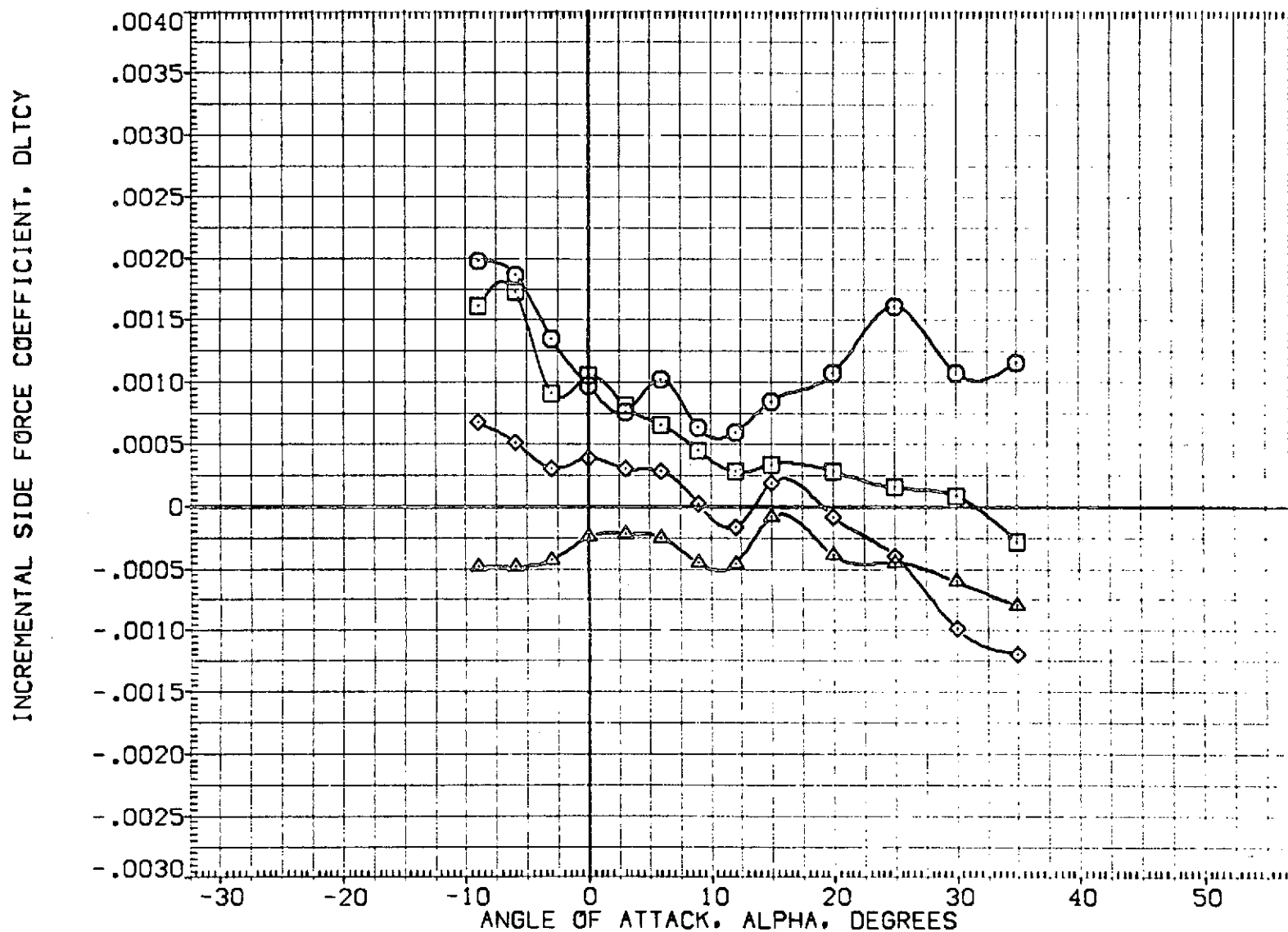


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | RN/L | PCPCS | REFERENCE INFORMATION | |
|-----------------|---|---------|-------|-------|-----------------------|------------------|
| [AHLF07] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .500 | .000 | SREF | 2690.0000 SQ.FT. |
| [AHLF06] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .720 | .000 | LREF | 474.8100 IN. |
| [AHLF05] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .850 | .000 | BREF | 935.6800 IN. |
| [AHLF08] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | 1.350 | .000 | XMRP | 1076.7000 IN. |
| | | | | | YMRP | .0000 IN. |
| | | | | | ZMRP | 375.0000 IN. |
| | | | | | SCALE | .0100 |

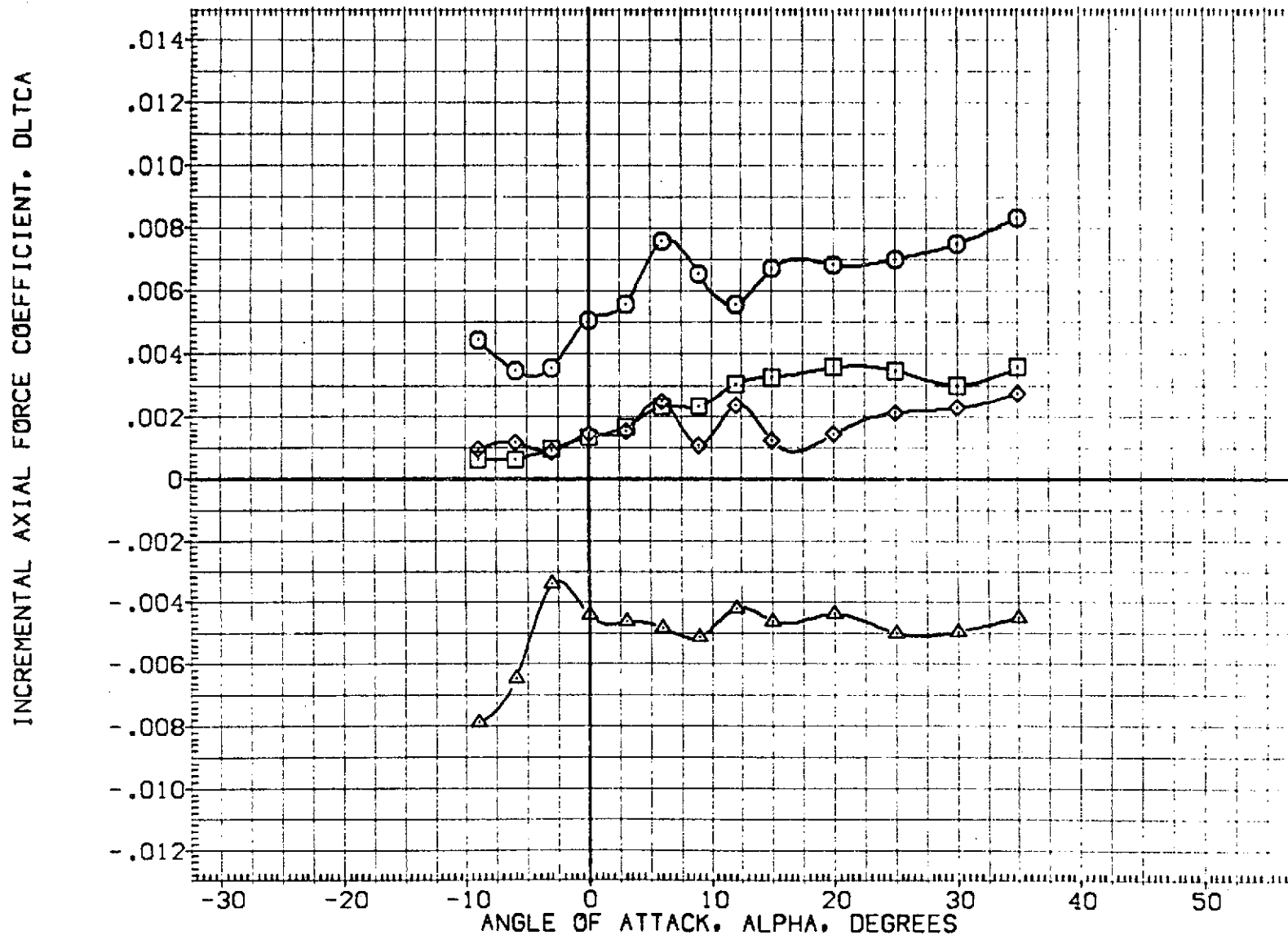


FIG. 04 REYNOLDS NUMBER EFFECT ON JET-OFF AERO CHARACTERISTICS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | OA82 CFHT113 MODEL 32-0 ORG V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL001) | OA82 CFHT113 MODEL 32-0 ORG V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL022) | OA82 CFHT113 MODEL 32-0 ORG V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

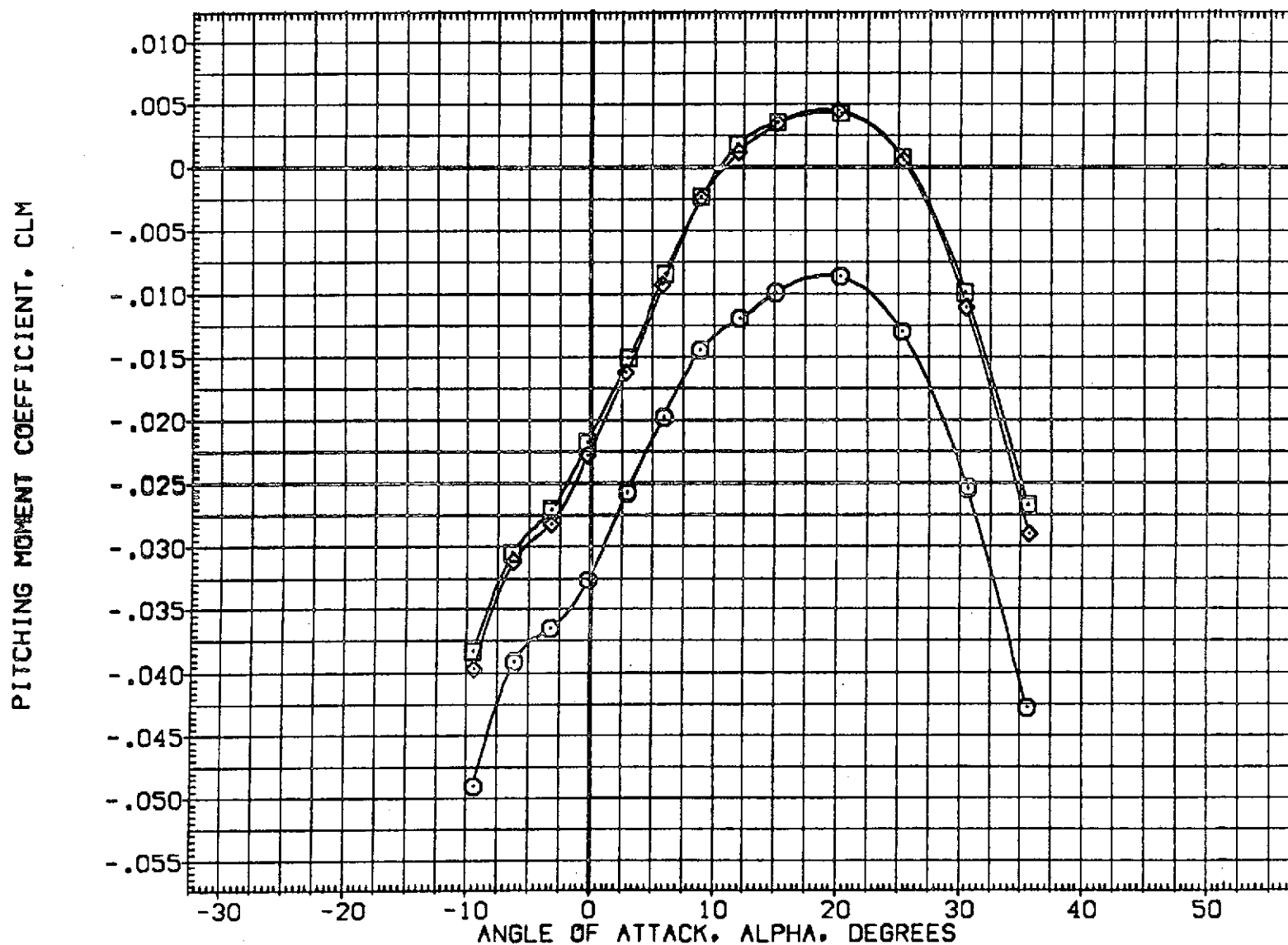


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL001) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 150.000 | 155.000 | 69.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL022) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 150.000 | 155.000 | 69.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | | YMRP | .0000 IN. |
| | | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

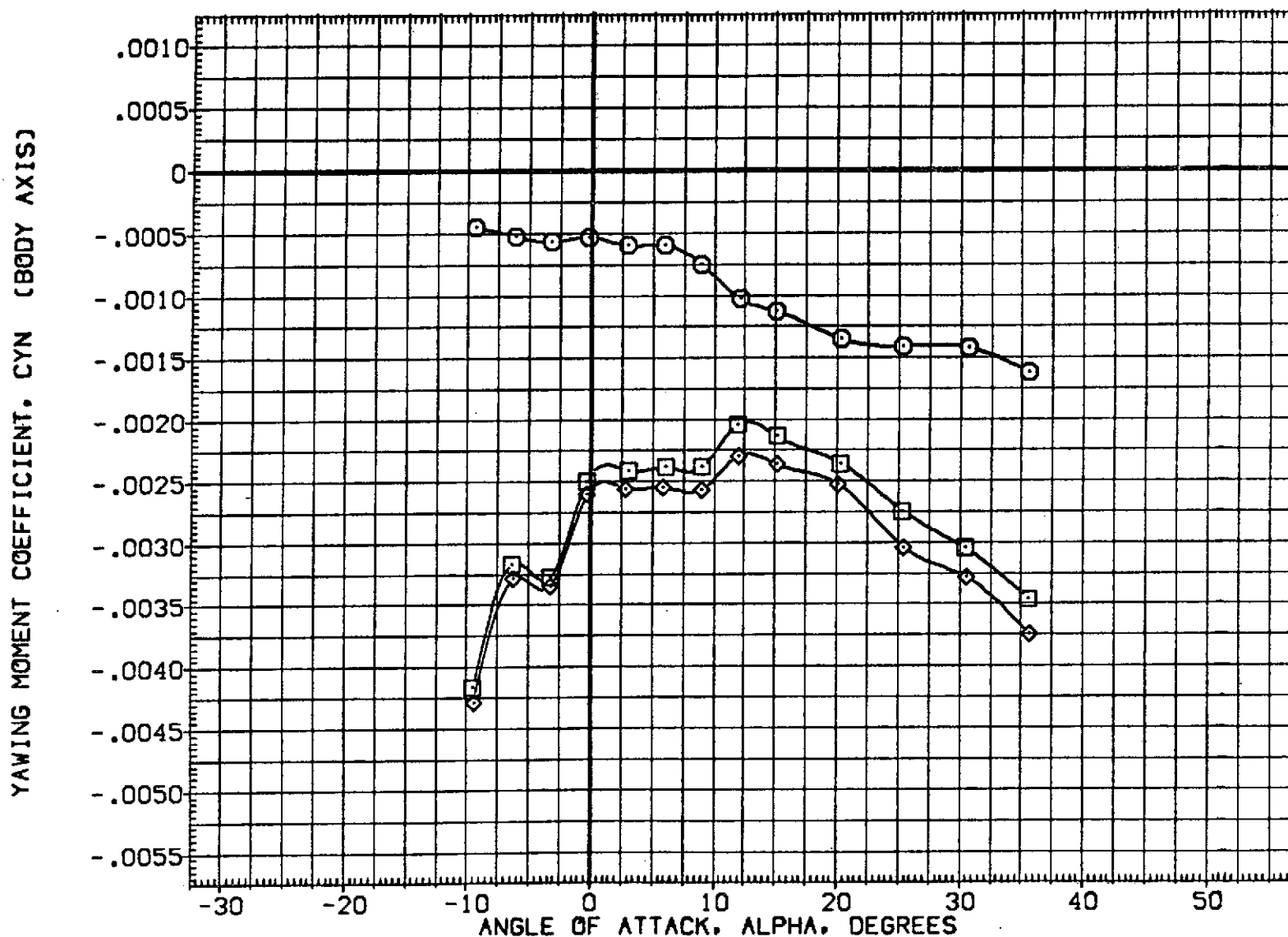


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|
| (RHLFO4) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL001) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | 150.000 | 155.000 | 68.000 | 47.500 | LREF 474.8100 IN. |
| (RHL022) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | 150.000 | 155.000 | 68.000 | 47.500 | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

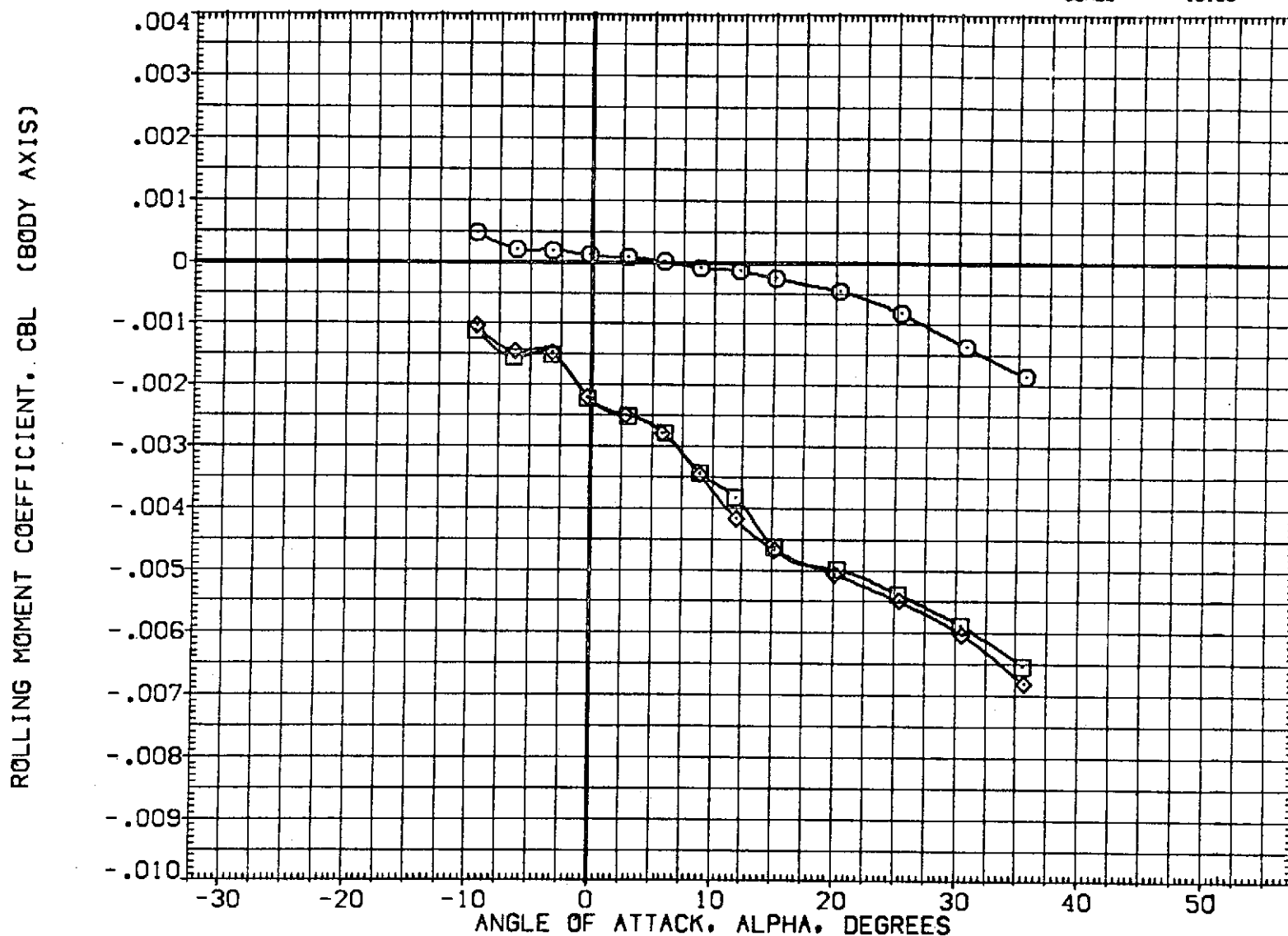


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|-----------|---------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL001) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL022) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | 150.000 | 155.000 | 69.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

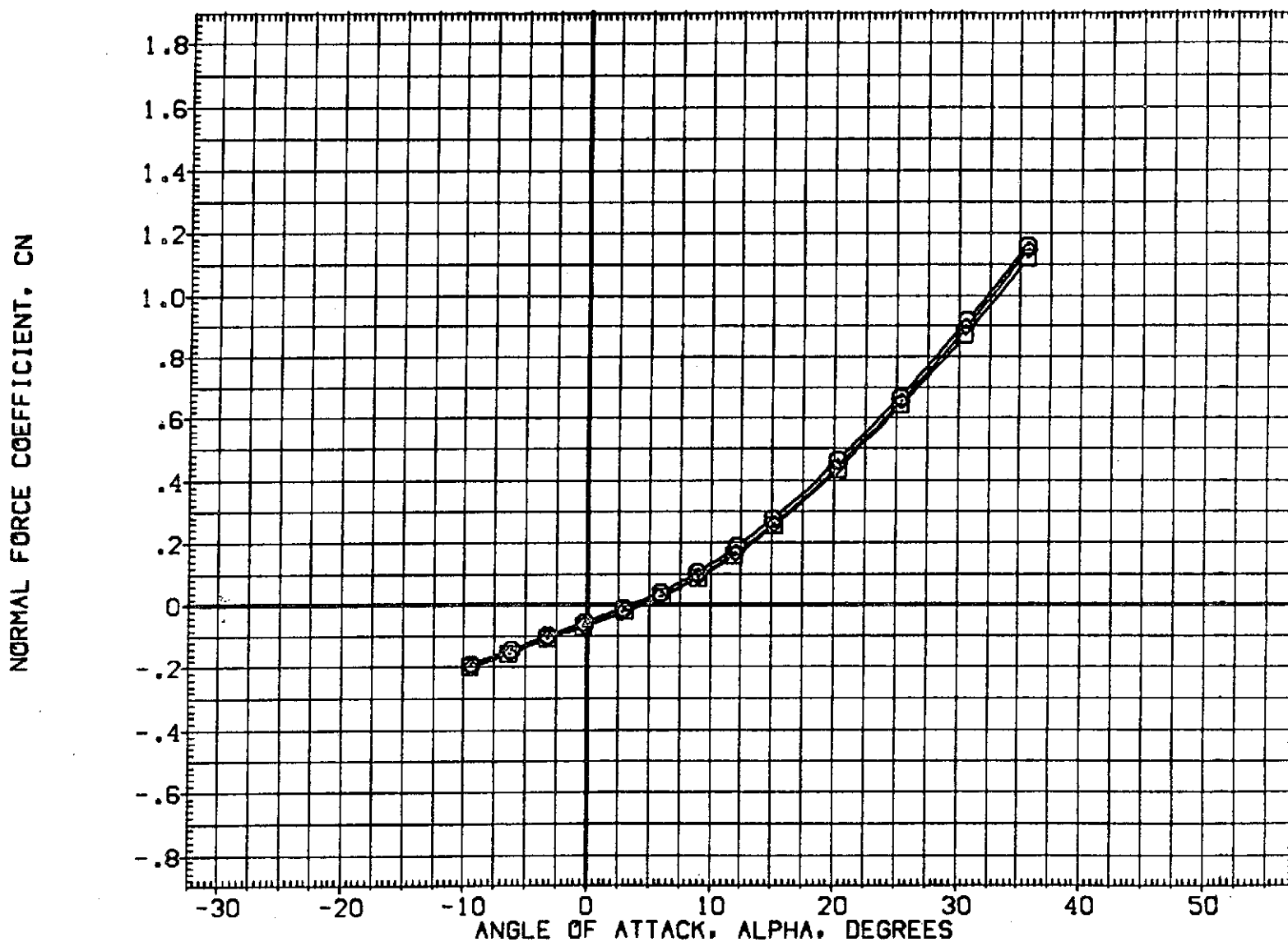


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 GR8 V/N85 | 150.000 | .000 | .000 | .000 | SREF 2680.0000 SQ.FT. |
| (RHL001) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 | 150.000 | 155.000 | 69.000 | 47.500 | LREF 474.8100 IN. |
| (RHL022) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 | 150.000 | 155.000 | 69.000 | 47.500 | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

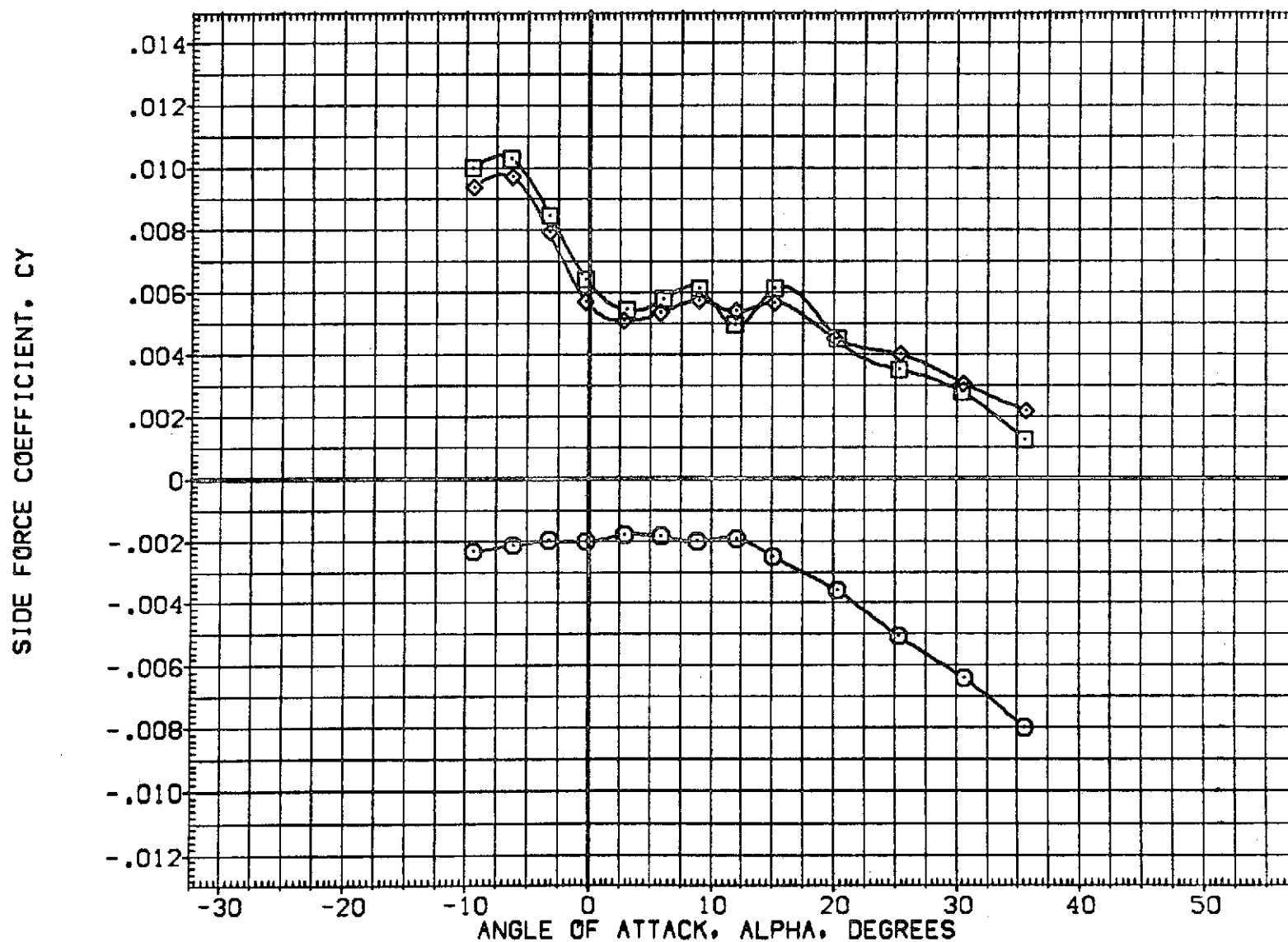


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|-----------|---------|
| (RHL04) | OA82 CFHT113 MODEL 32-0 ORB V/N85 | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL001) | OA82 CFHT113 MODEL 32-0 ORB V/N49 | 150.000 | 155.000 | 69.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL022) | OA82 CFHT113 MODEL 32-0 ORB V/N49 | 150.000 | 155.000 | 69.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

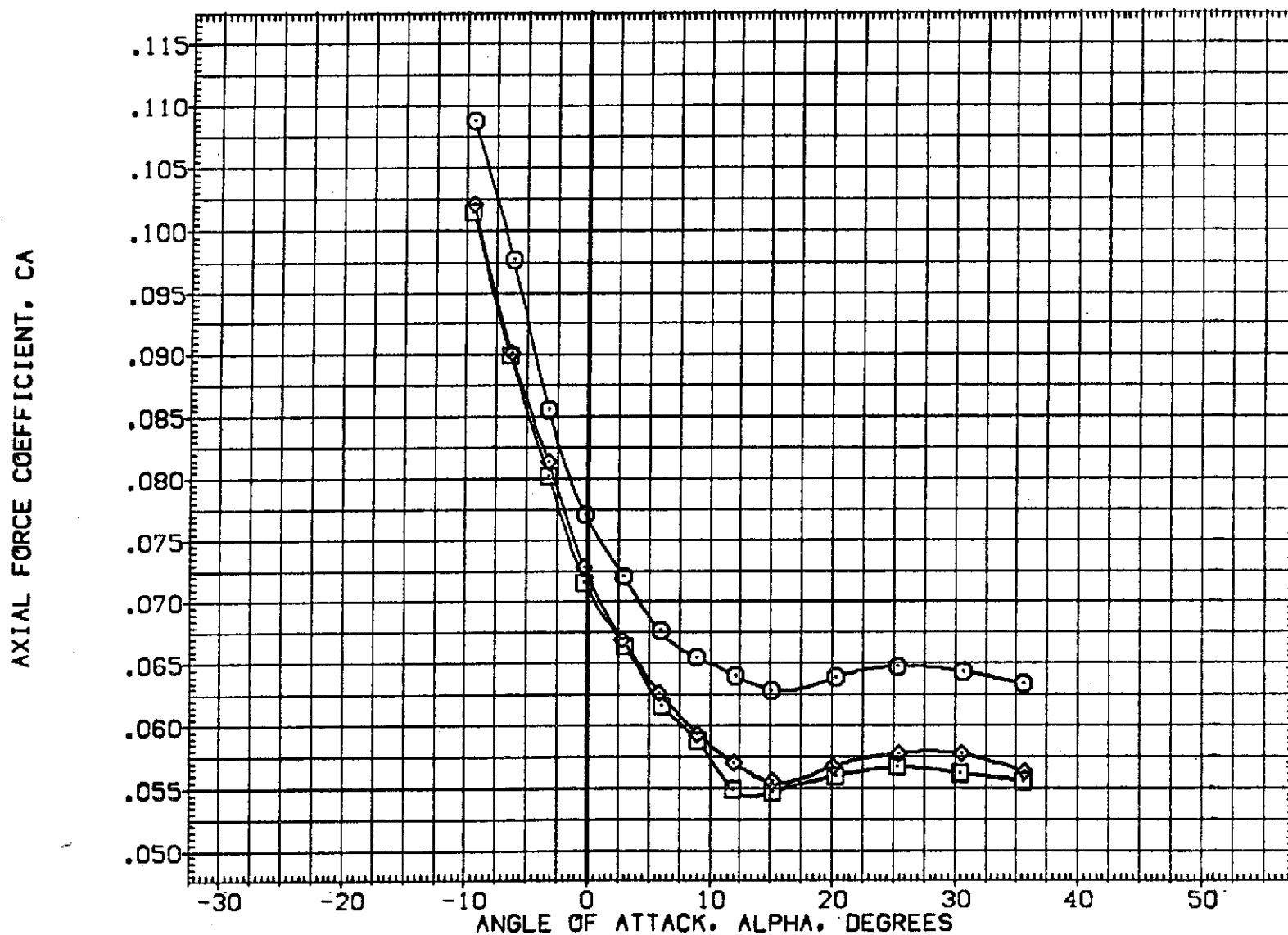


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC01) | 0A82 CFHT113 MODEL 32-0 GRB W/N49 | (AIR) |
| (CHLC22) | 0A82 CFHT113 MODEL 32-0 GRB W/N49 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|--------|-----------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 69.000 | 47.500 | LREF 474.9100 IN. |
| | | | | BREF 936.6800 IN. |
| | | | | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

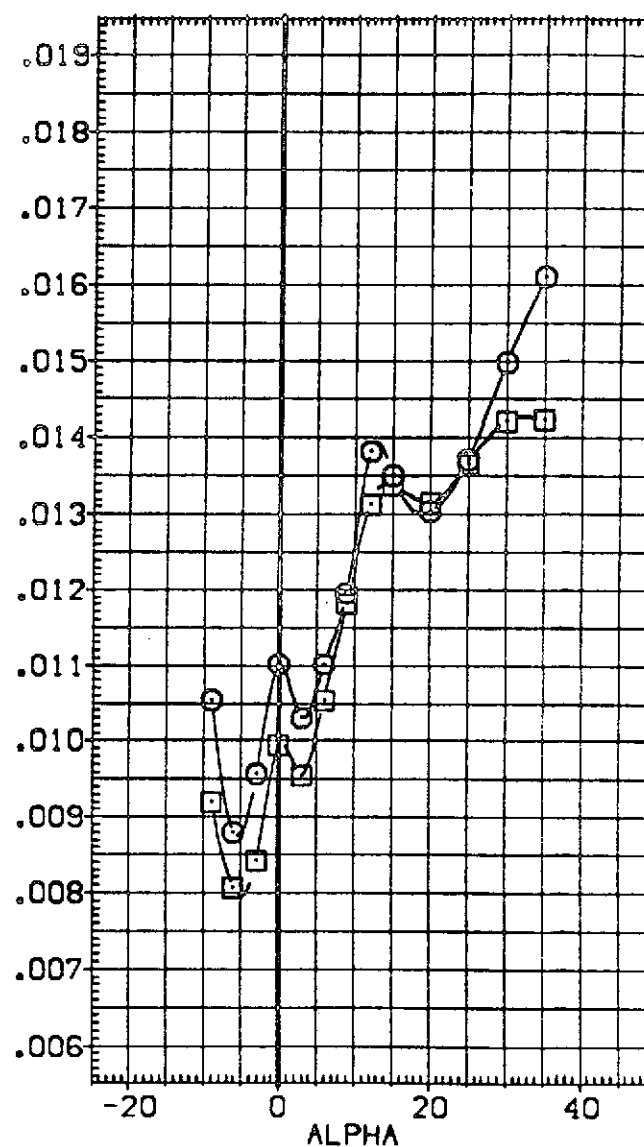
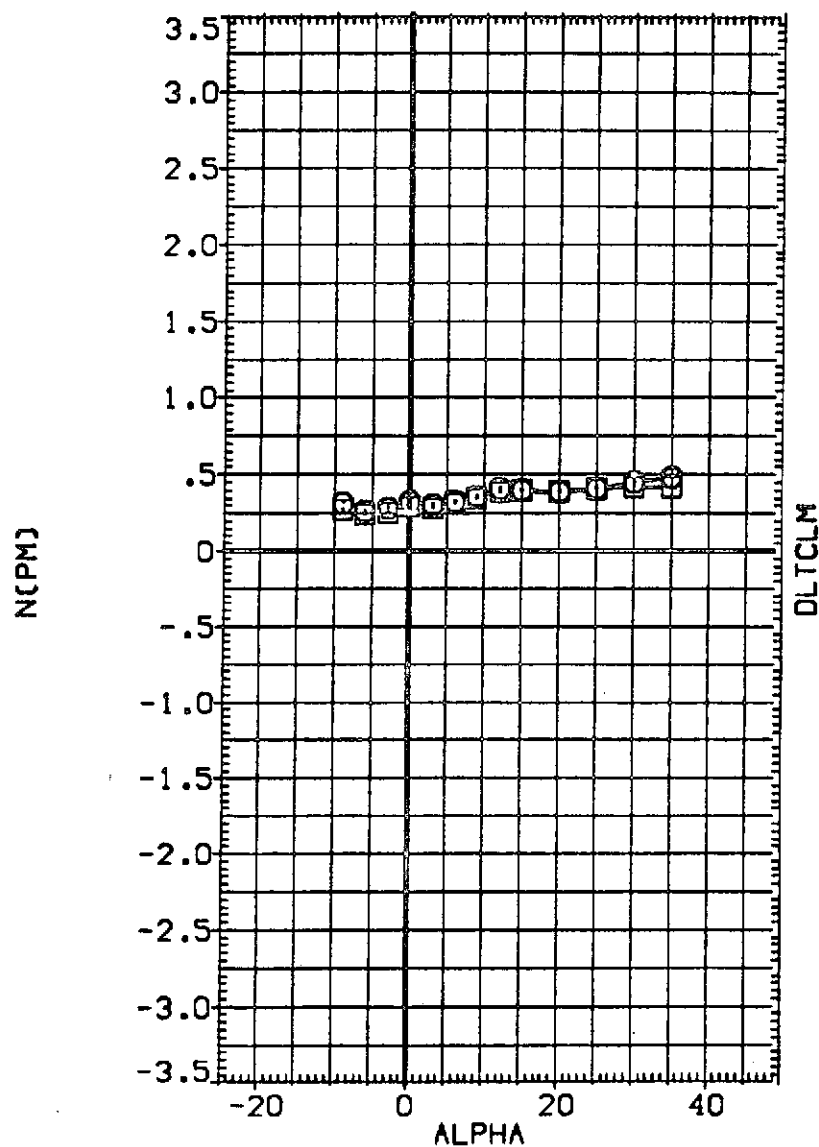


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC01] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC22] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2650.0000 SQ.FT. |
| 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

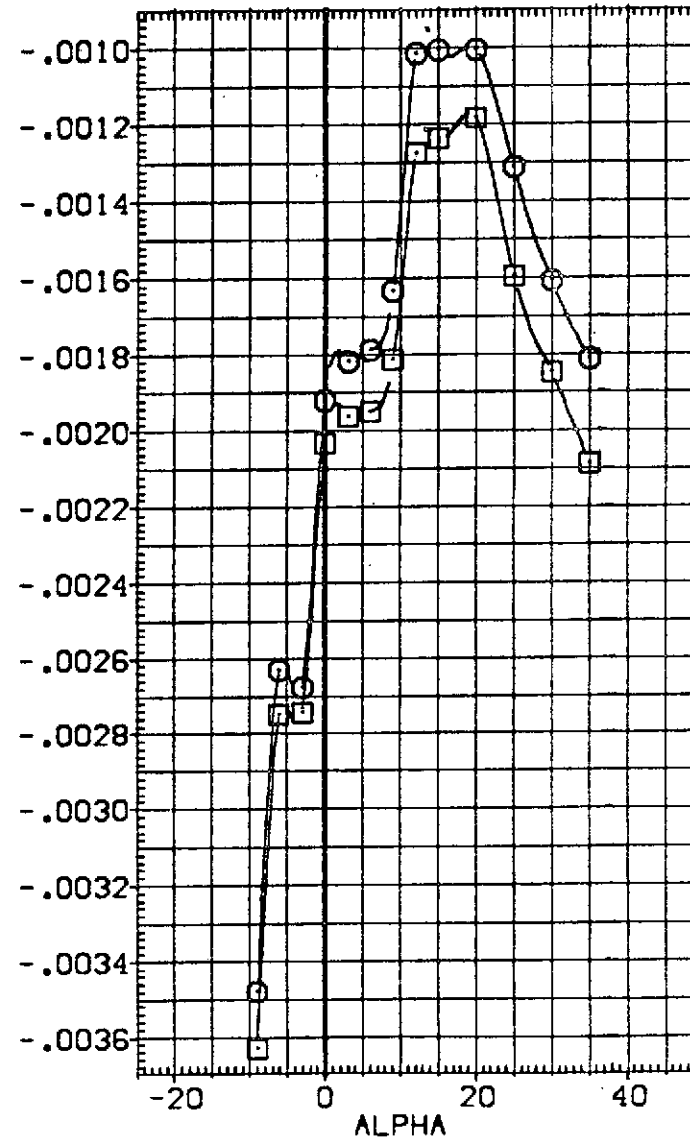
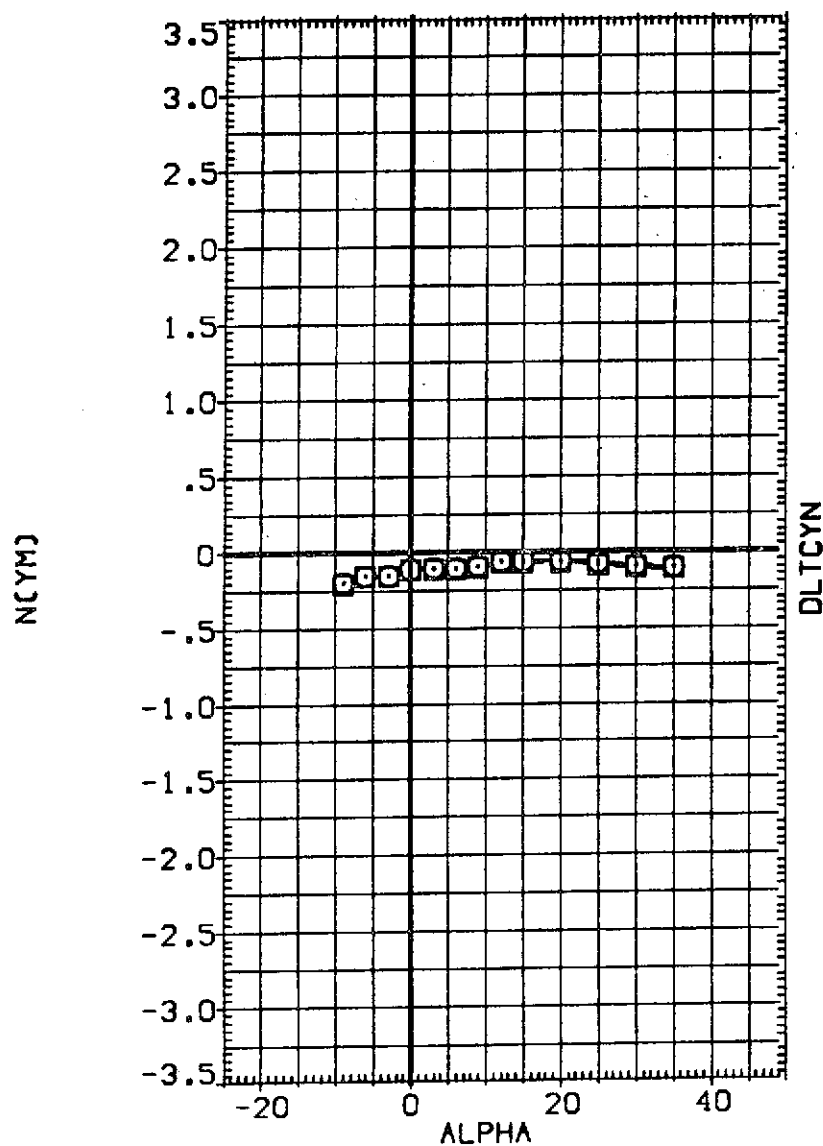


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC01) ○ | OAS2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC22) □ | OAS2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 69.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 935.6800 IN. |
| | | | | XMRF | 1076.7000 IN. |
| | | | | YMRF | .0000 IN. |
| | | | | ZMRF | 375.0000 IN. |
| | | | | SCALE | .0100 |

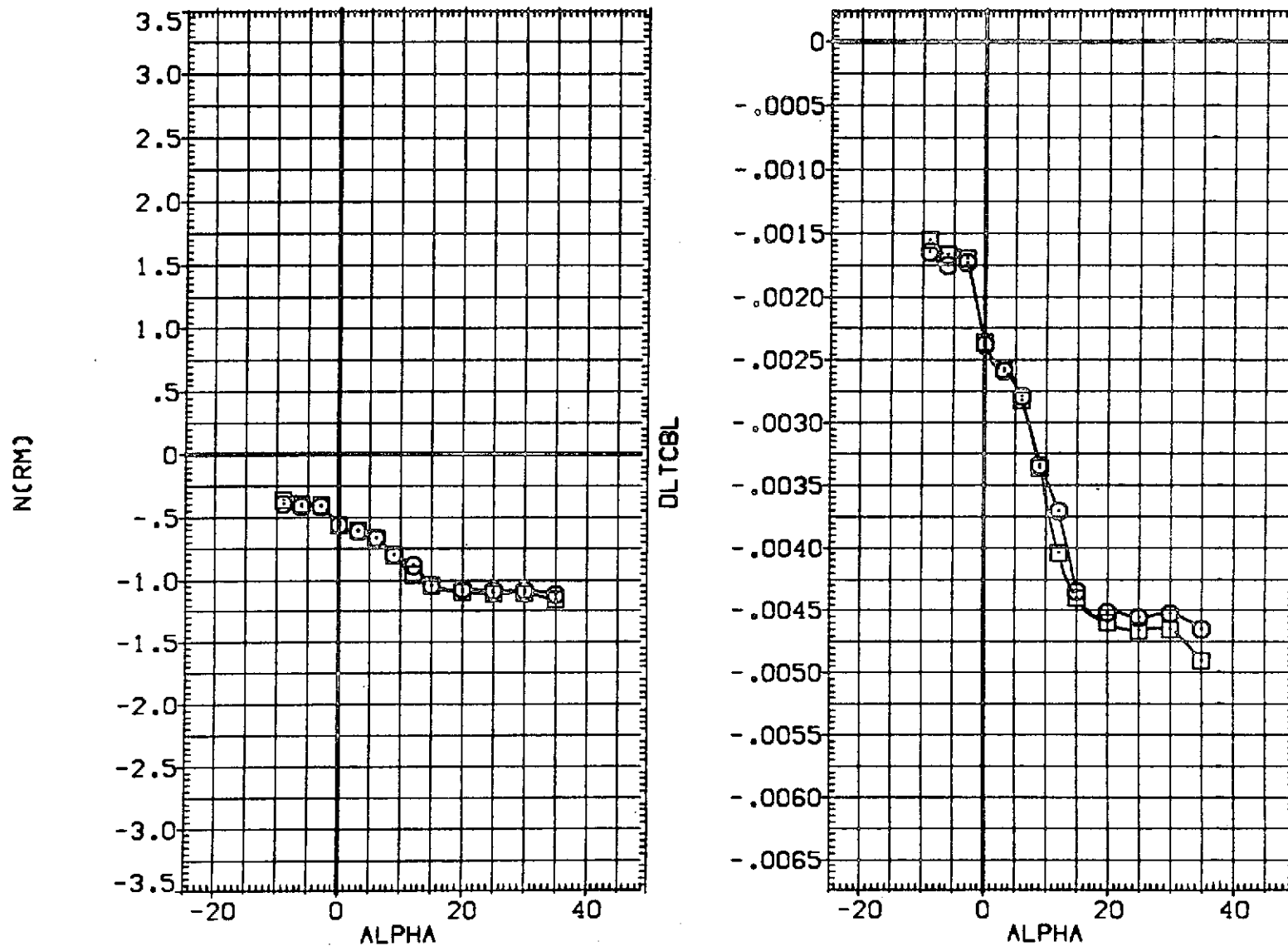


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC01) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC22) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|---------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 155.000 | 69.000 | 47.500 | LREF | 474.0100 | IN. |
| | | | | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

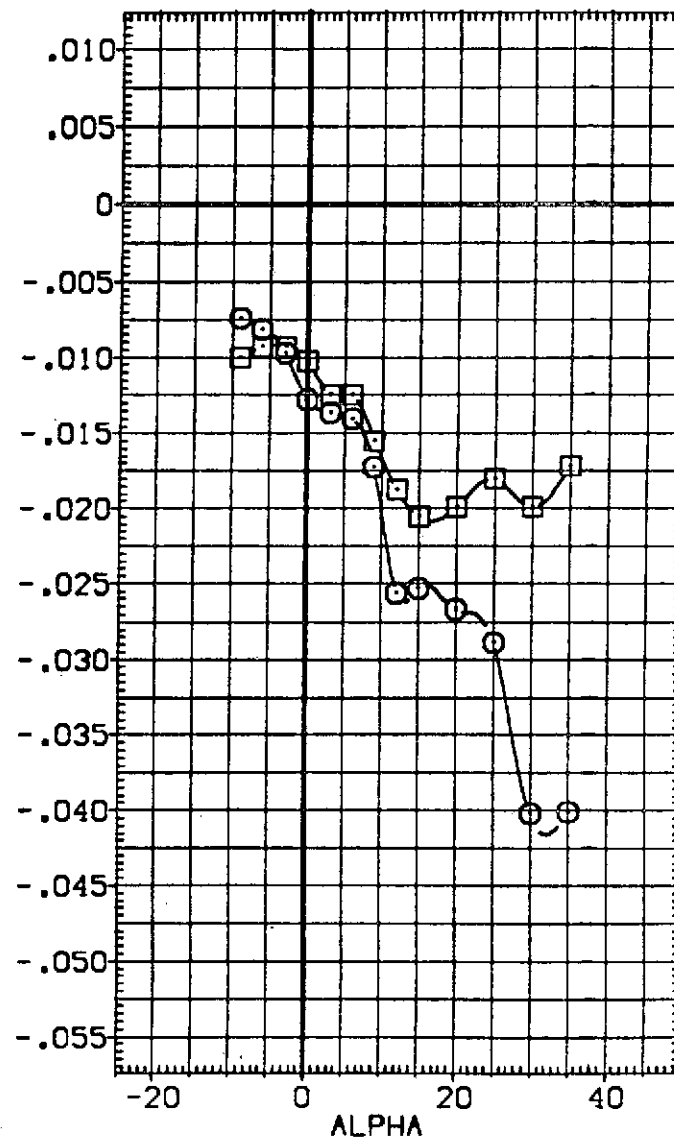
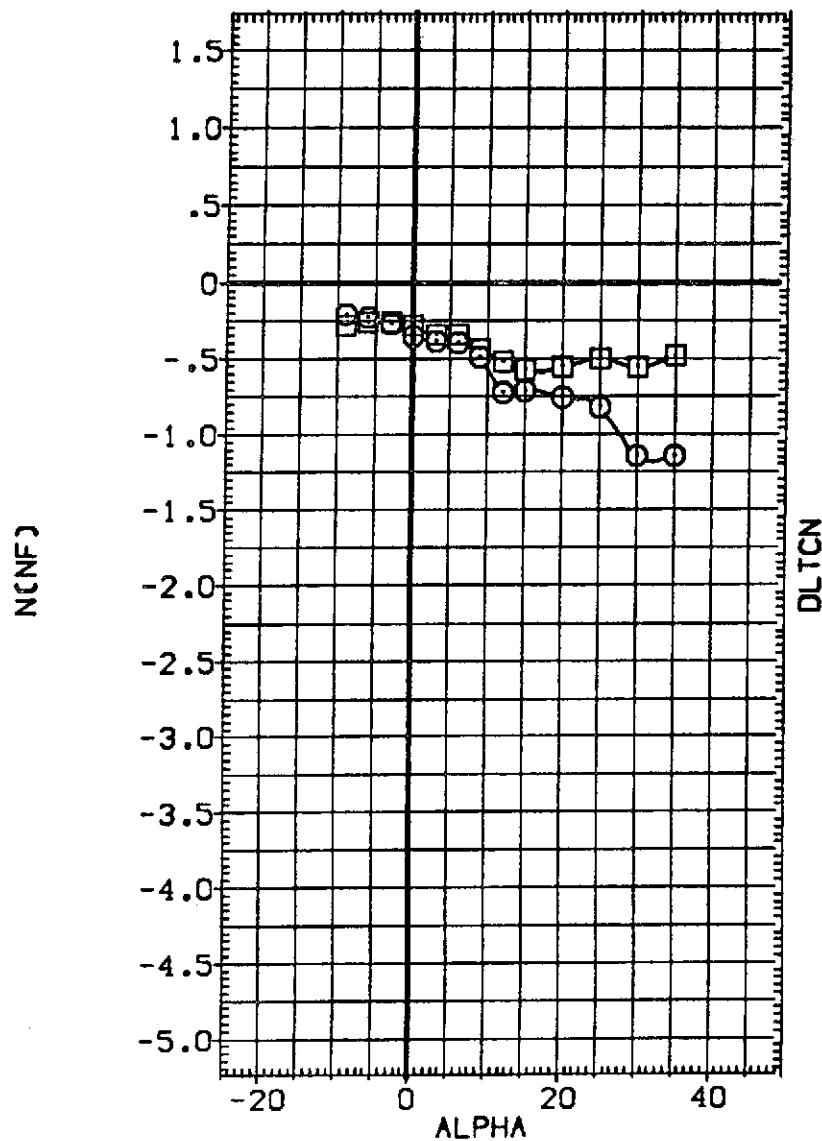


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-------------------------------------|-------|
| [CHLC01] | ○ 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC22] | □ 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |

| Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 69.000 | 47.500 | SREF | 2650.0000 SQ.FT. |
| 150.000 | 155.000 | 69.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

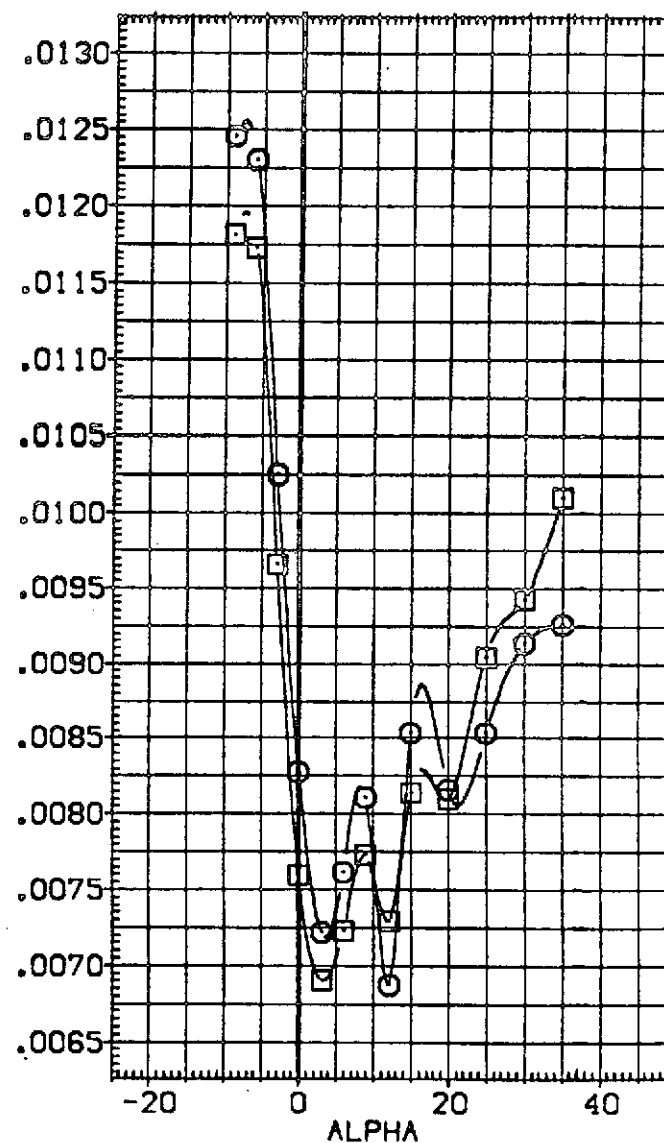
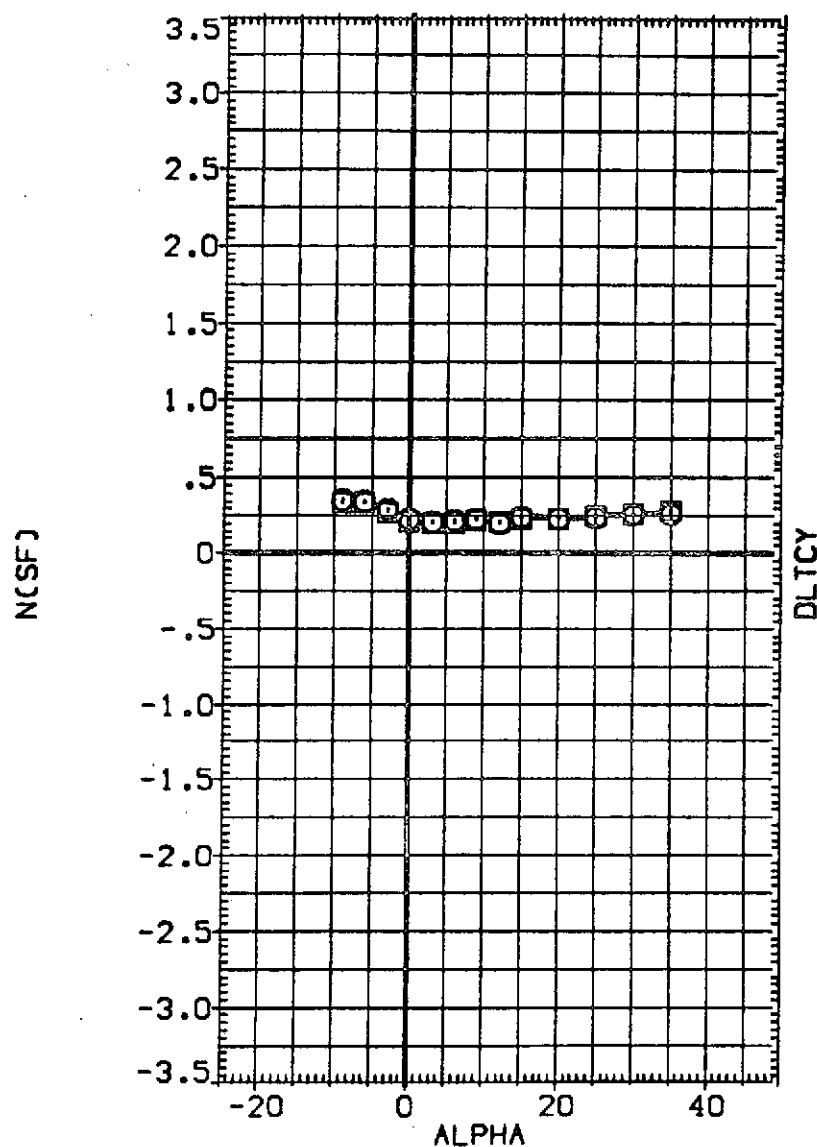


FIG. 05 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N49

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL021) | 0A82 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 150.000 | 155.000 | 73.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

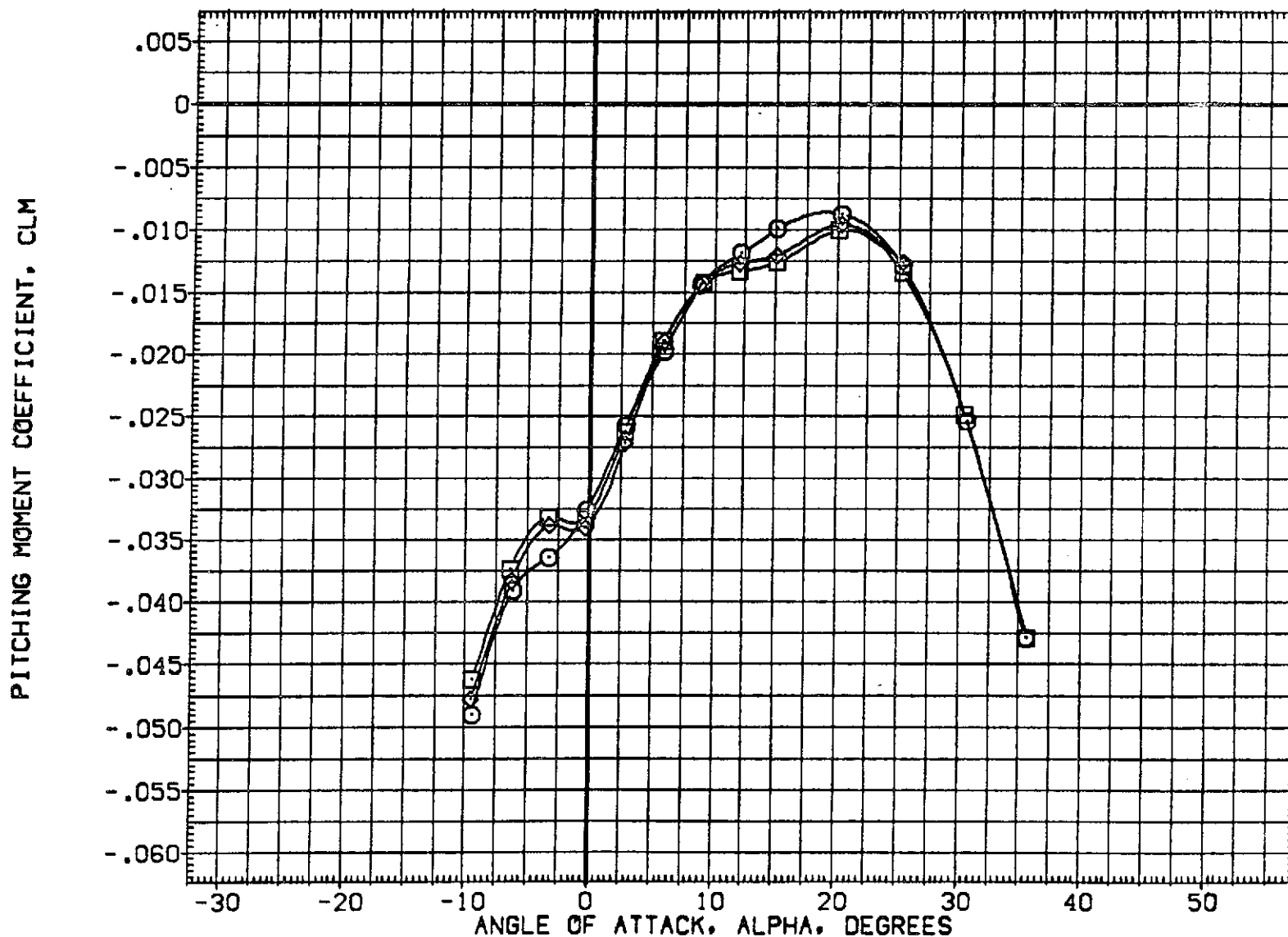


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | RCS OFF | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 CRB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 CRB V/N52 | (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| (RHL021) | 0A82 CFHT113 MODEL 32-0 CRB V/N52 | (AIR) | 150.000 | 155.000 | 73.000 | 47.500 | BREF 936.6800 IN. |
| | | | | | | | XMRP 1076.7000 IN. |
| | | | | | | | YMRP .0000 IN. |
| | | | | | | | ZMRP 375.0000 IN. |
| | | | | | | | SCALE .0100 |

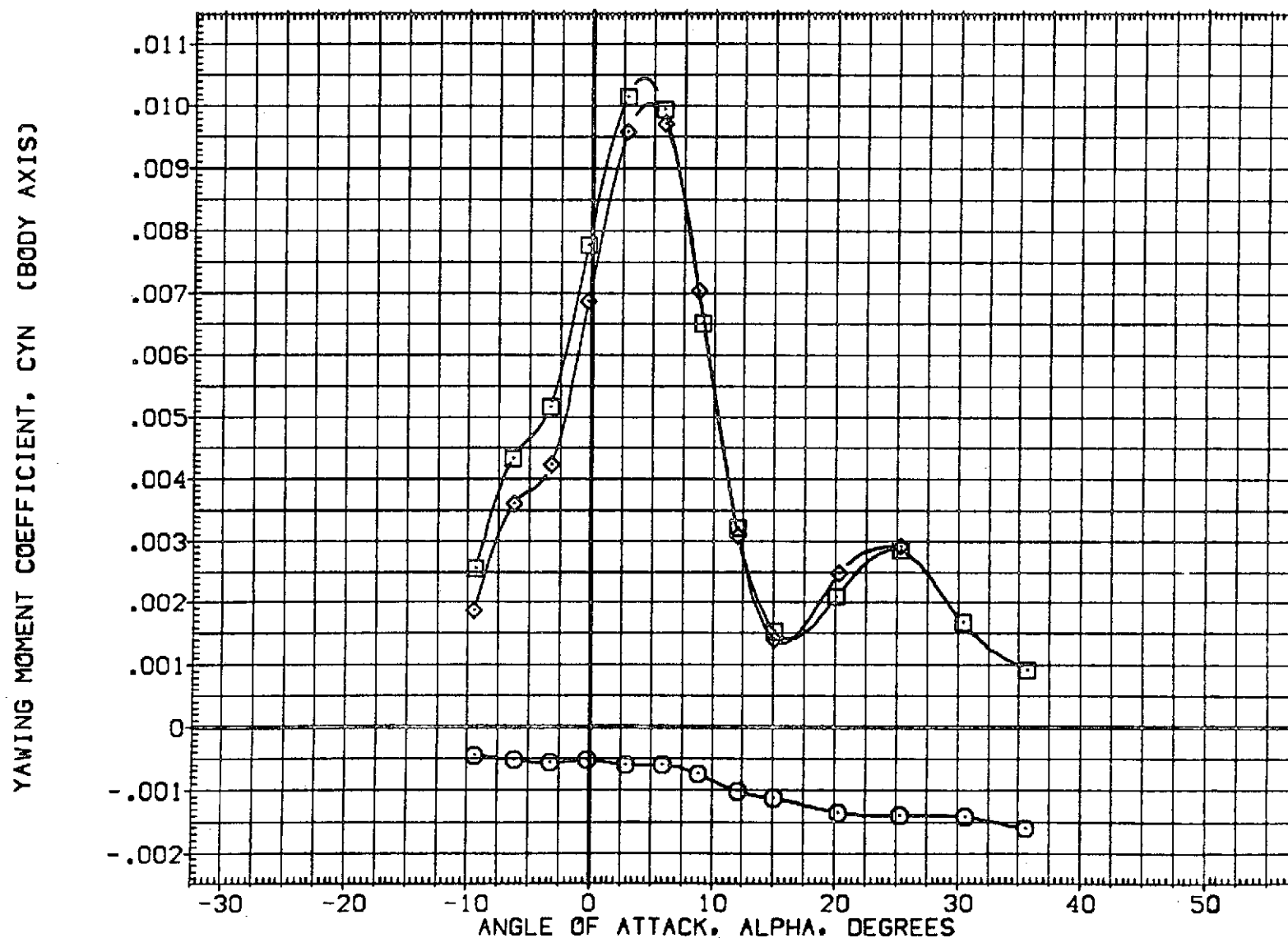


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | ρ (PSF) | FCRCS | TCRCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|--------------|---------|--------|--------|-----------------------|-----------|--------|
| [RHL04] | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 | 150,000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| [RHL009] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | 150,000 | 155,000 | 70,000 | 47,500 | LREF | 474.8100 | IN. |
| [RHL021] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | 150,000 | 155,000 | 73,000 | 47,500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |



FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|--------|-----------------------|------------------|
| [RHLFO4] | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHL009] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| [RHL021] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 73.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

NORMAL FORCE COEFFICIENT, CN

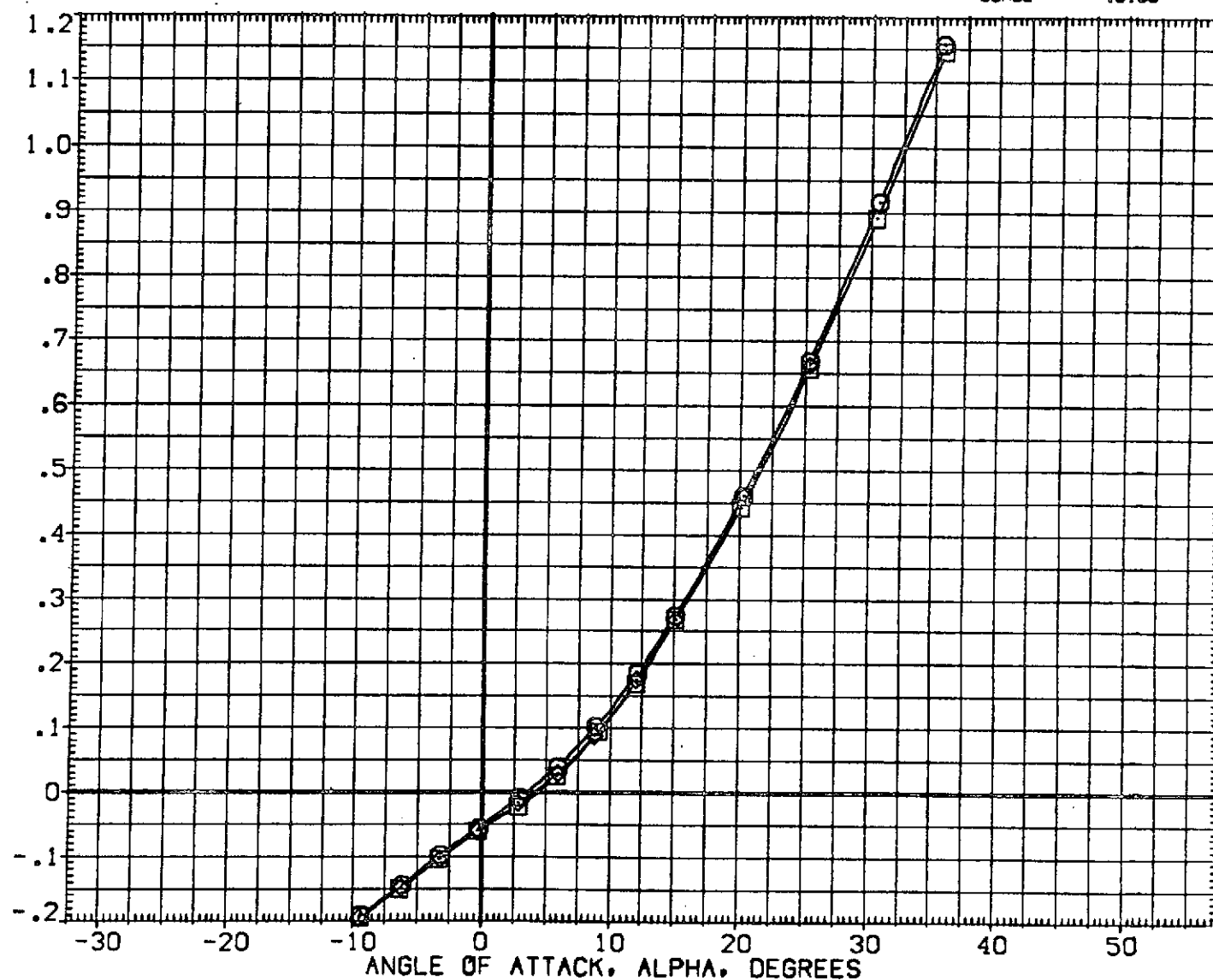


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | RCS OFF | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 ORB V/N55 | [AIR] | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | [AIR] | 150.000 | 155.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| (RHL021) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | [AIR] | 150.000 | 155.000 | 73.000 | 47.500 | BREF 936.6800 IN. |
| | | | | | | | XMRP 1076.7000 IN. |
| | | | | | | | YMRP .0000 IN. |
| | | | | | | | ZMRP 375.0000 IN. |
| | | | | | | | SCALE .0100 |

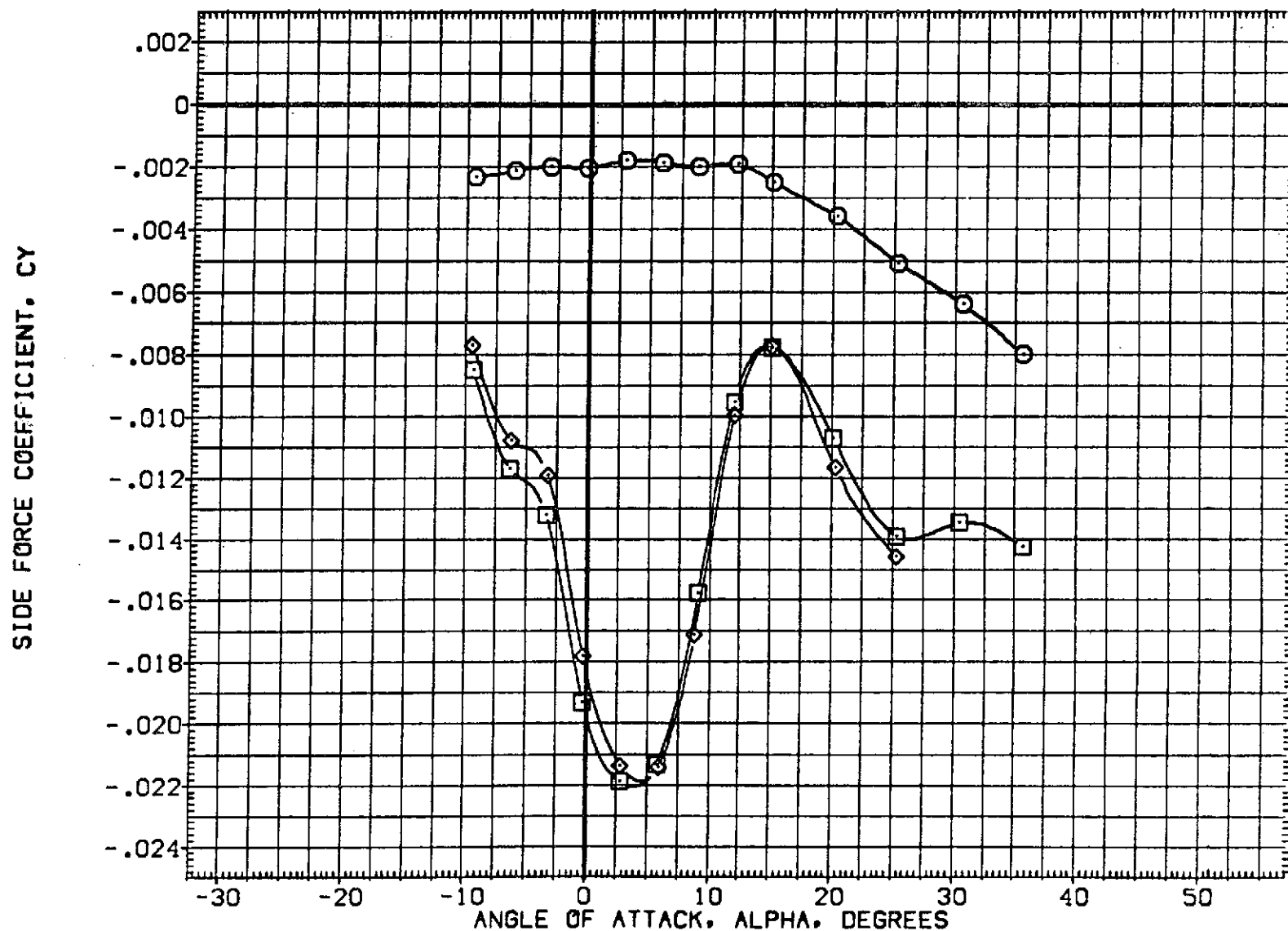


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 ORB V/N53 | 150.000 | .000 | .000 | .000 | QREF | 2690.0000 SQ.FT. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL021) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 | 150.000 | 155.000 | 73.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

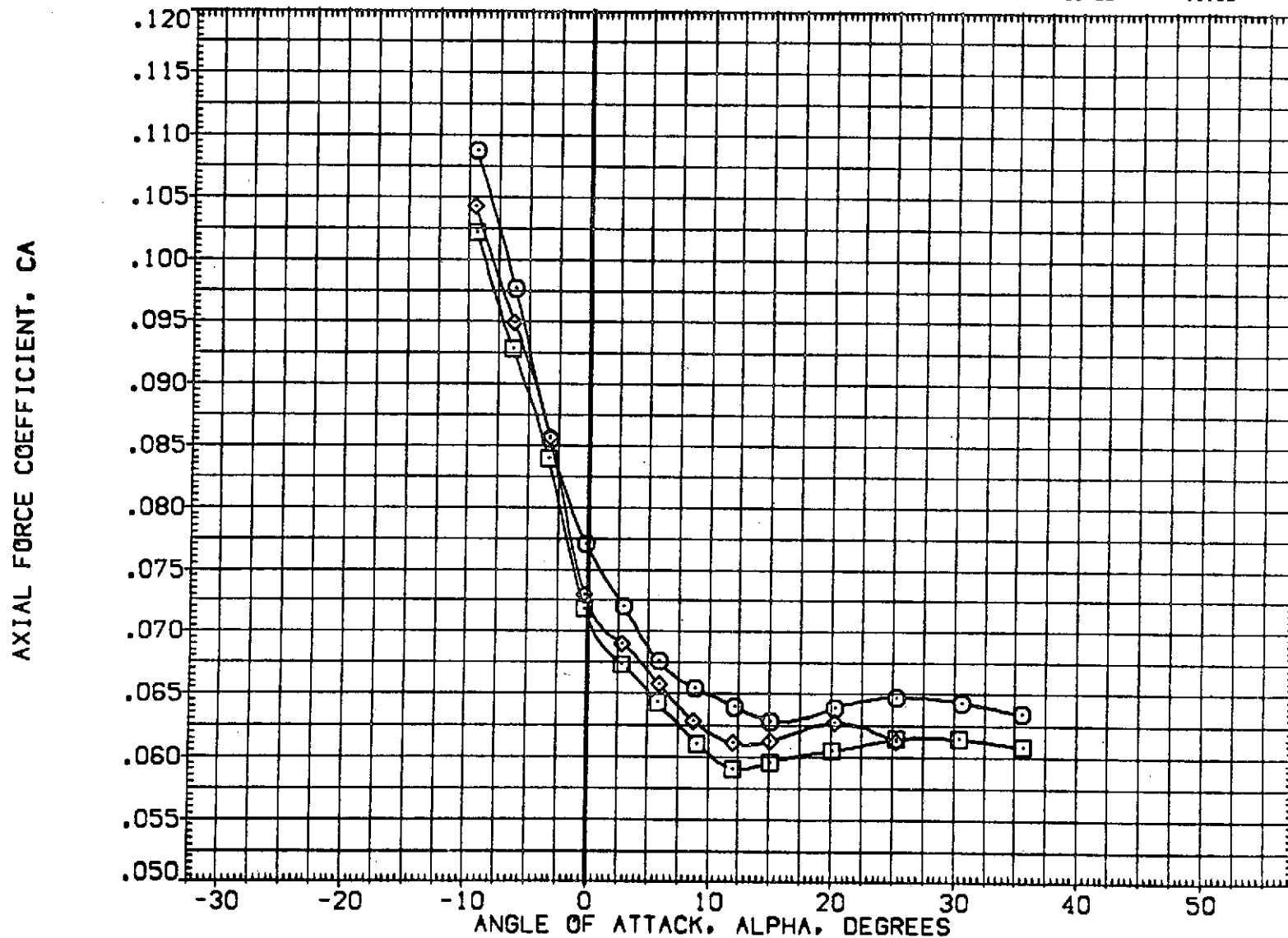


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC09] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | [AIR] |
| [CHLC21] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | [AIR] |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 73.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

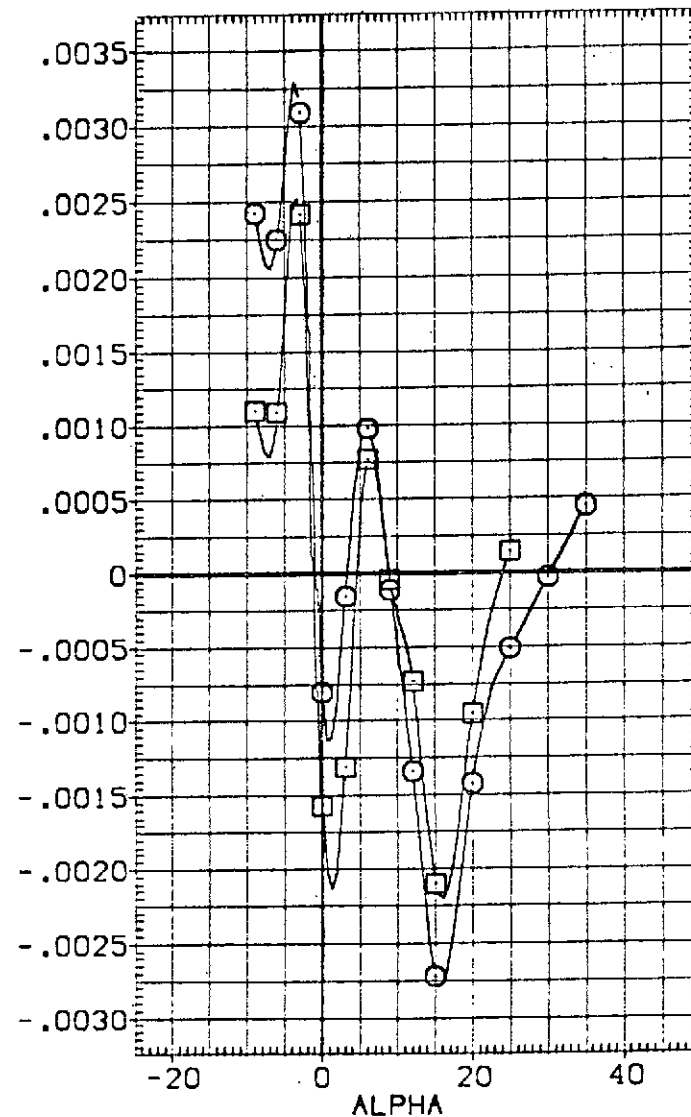
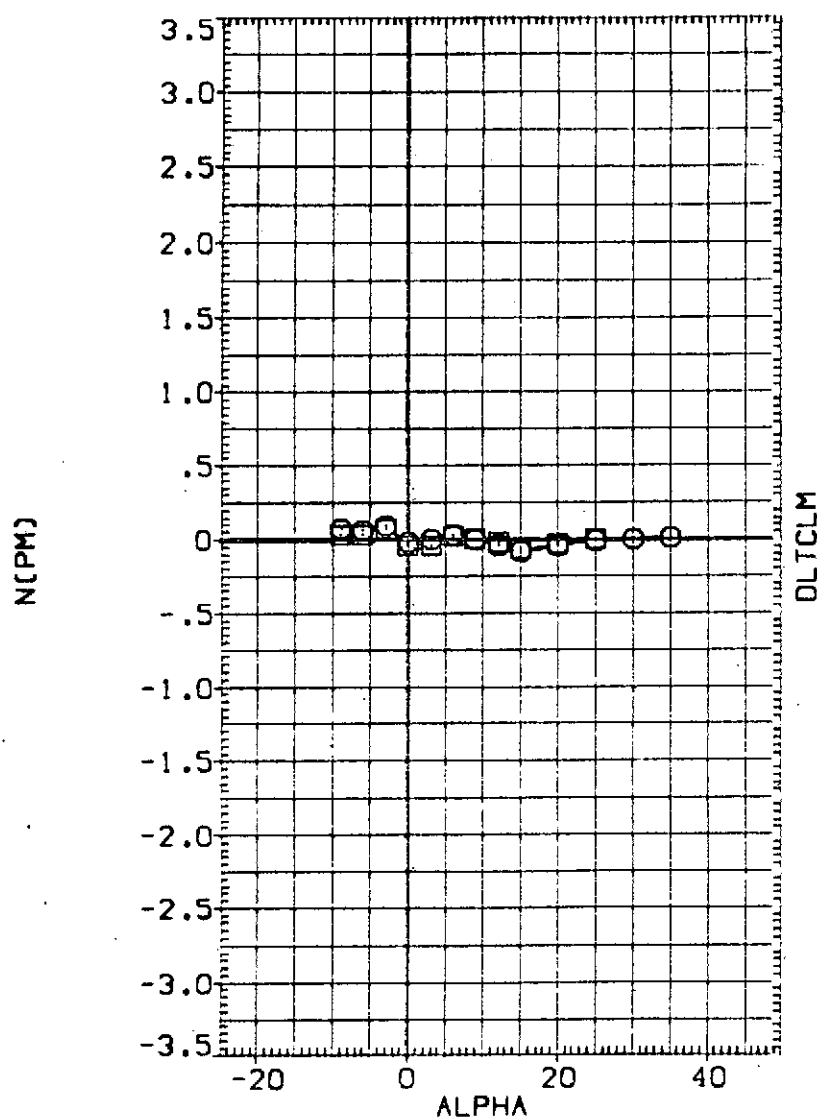


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52
(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC09) ○ OA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR)
 (CHLC21) □ OA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR)

| D(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 50.FT. |
| 150.000 | 155.000 | 73.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRF | 1076.7000 IN. |
| | | | | YMRF | 1.0000 IN. |
| | | | | ZMRF | 375.0000 IN. |
| | | | | SCALE | .0100 |

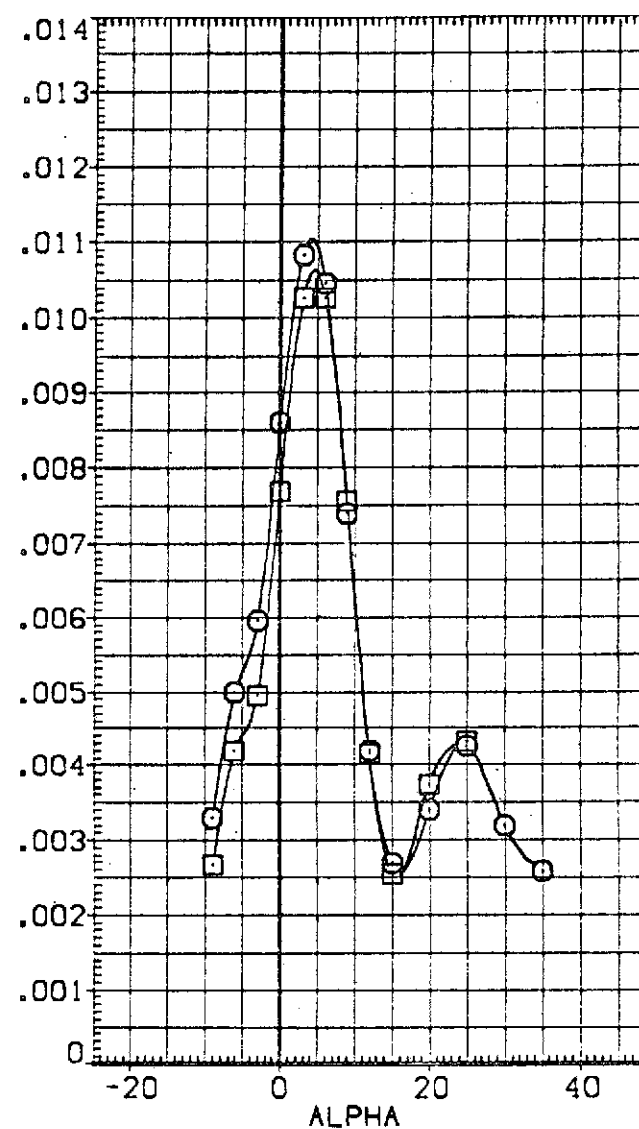
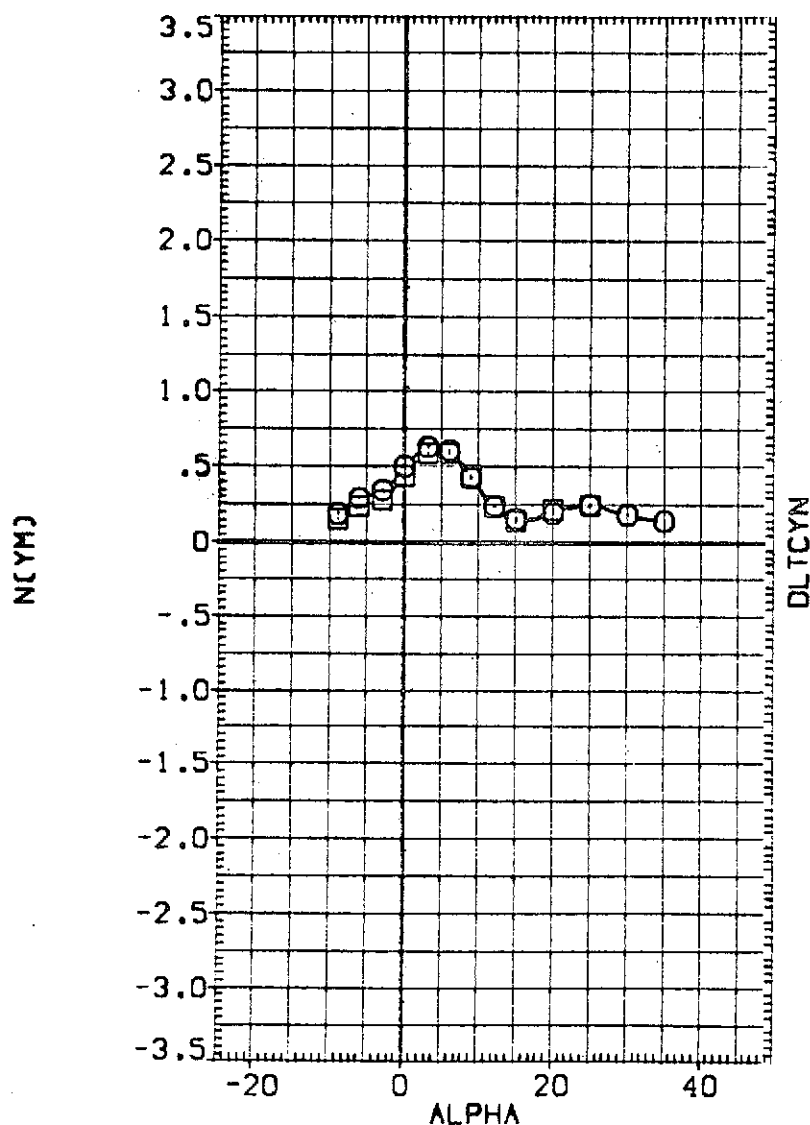


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52
 (A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC09) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | (AIR) |
| (CHLC21) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 73.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

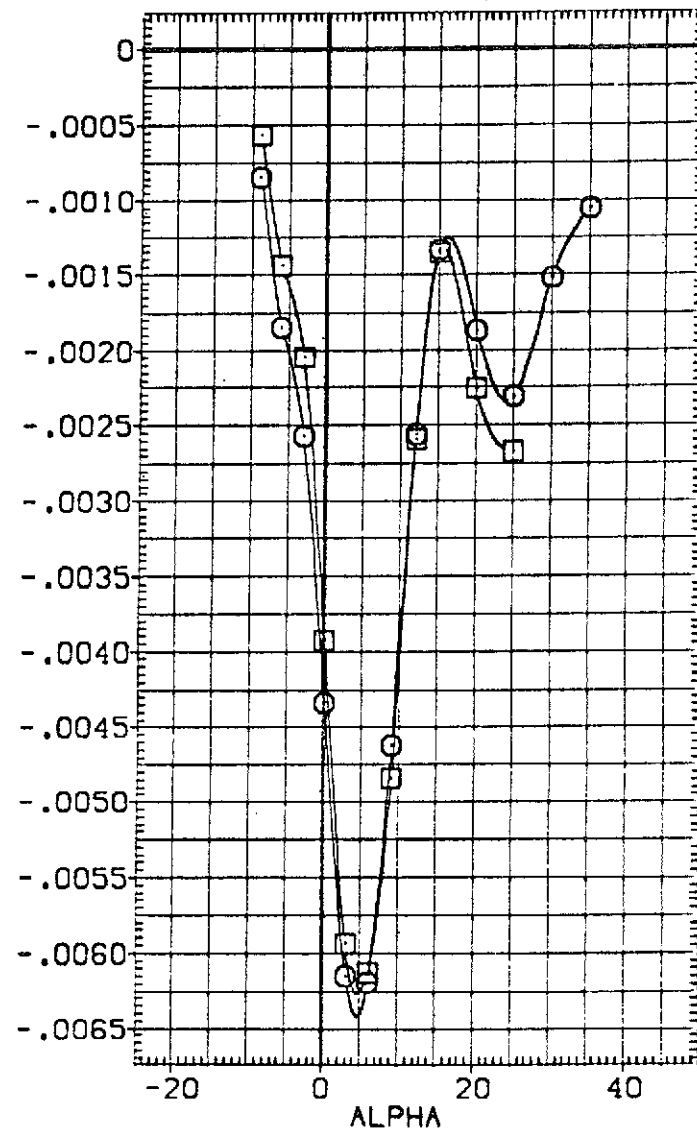
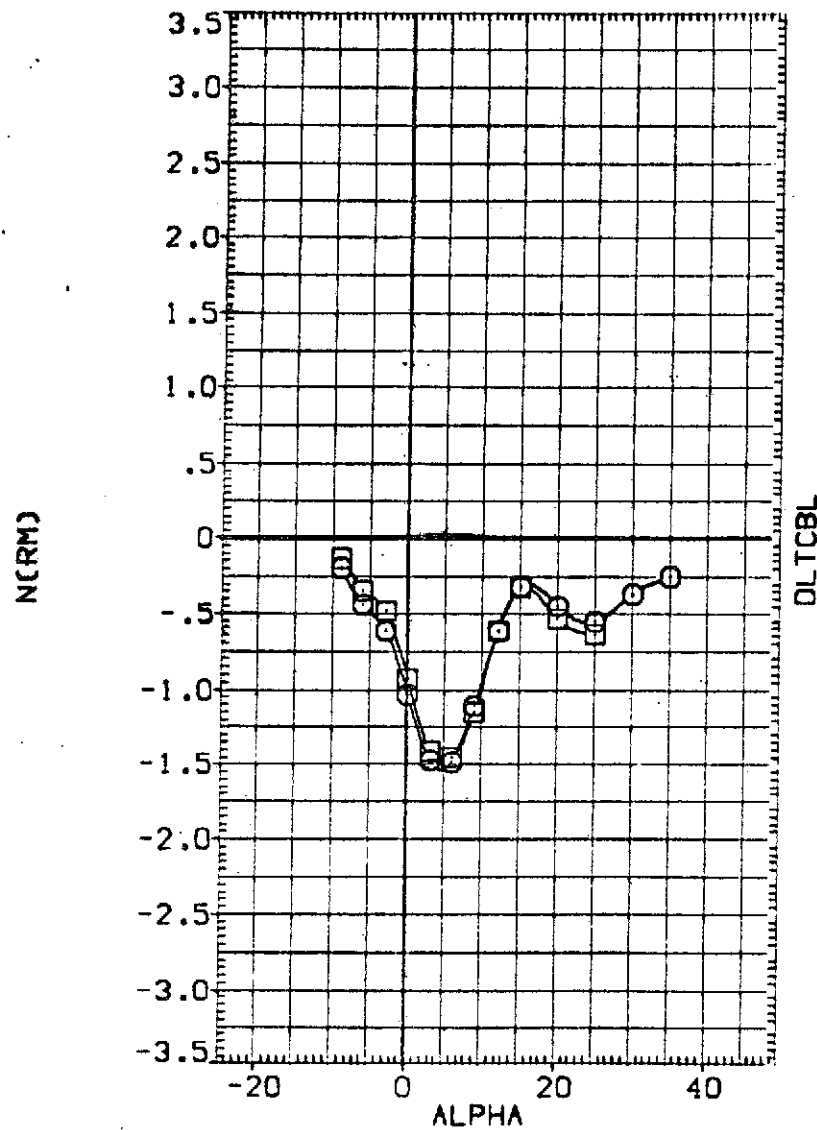




FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC09)  0A82 CFHT113 MODEL 32-0 ORB W/N52 (AIR)
 (CHLC21)  0A82 CFHT113 MODEL 32-0 ORB W/N52 (AIR)

| Q(PSF) | PC RCS | TC RCS | T/OA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 73.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XM RP | 1076.7000 IN. |
| | | | | YM RP | .0000 IN. |
| | | | | ZM RP | 375.0000 IN. |
| | | | | SCALE | .0100 |

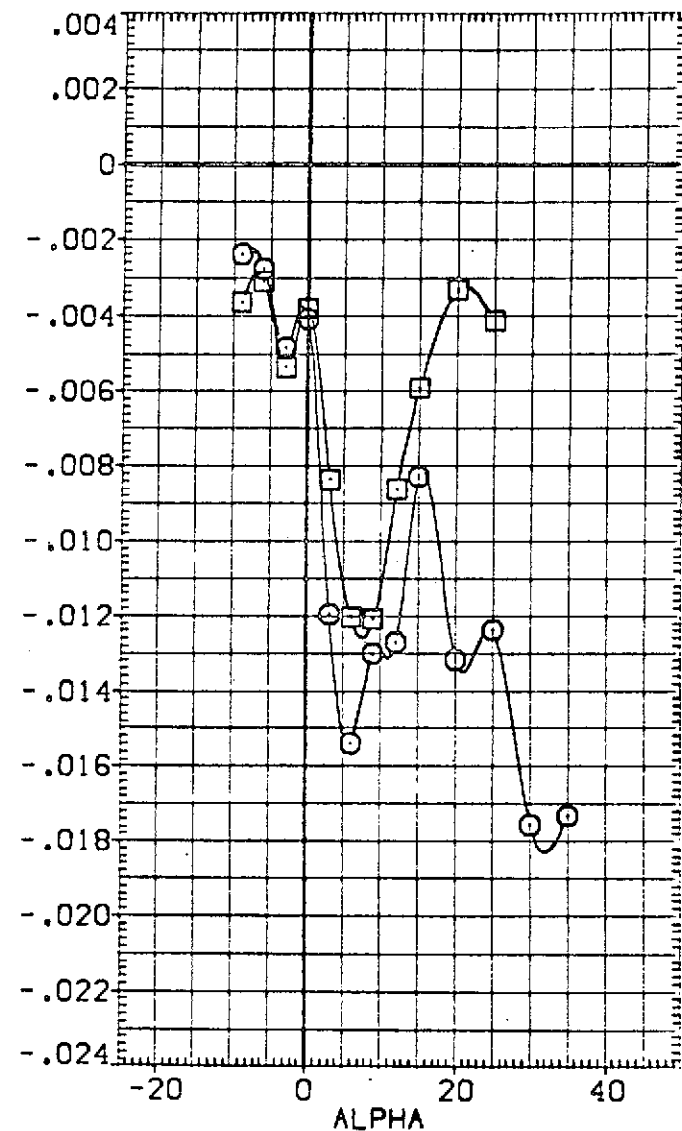
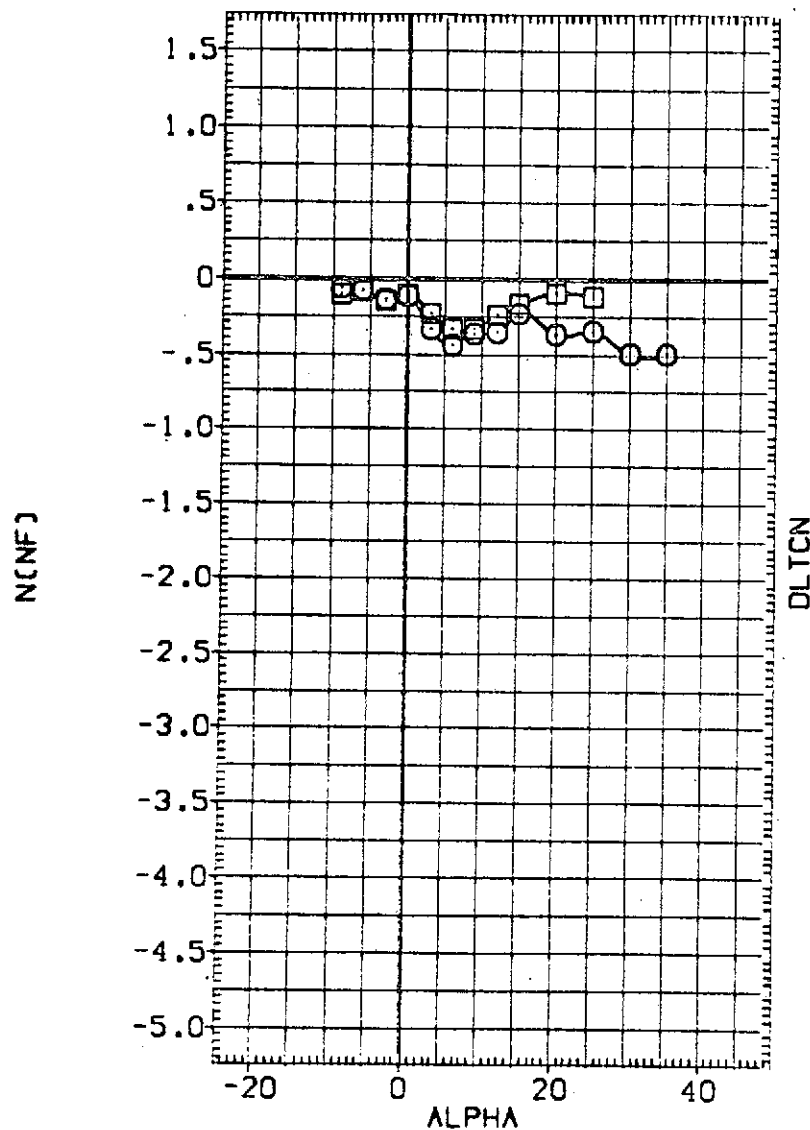


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52
 (A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC09) | 0A82 CFHT113 MODEL 32-0 DRB W/N52 | (AIR) |
| (CHLC21) | 0A82 CFHT113 MODEL 32-0 DRB W/N52 | (AIR) |

| Q(PSF) | PCRCS | TCRCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 50.FT. |
| 150.000 | 155.000 | 73.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

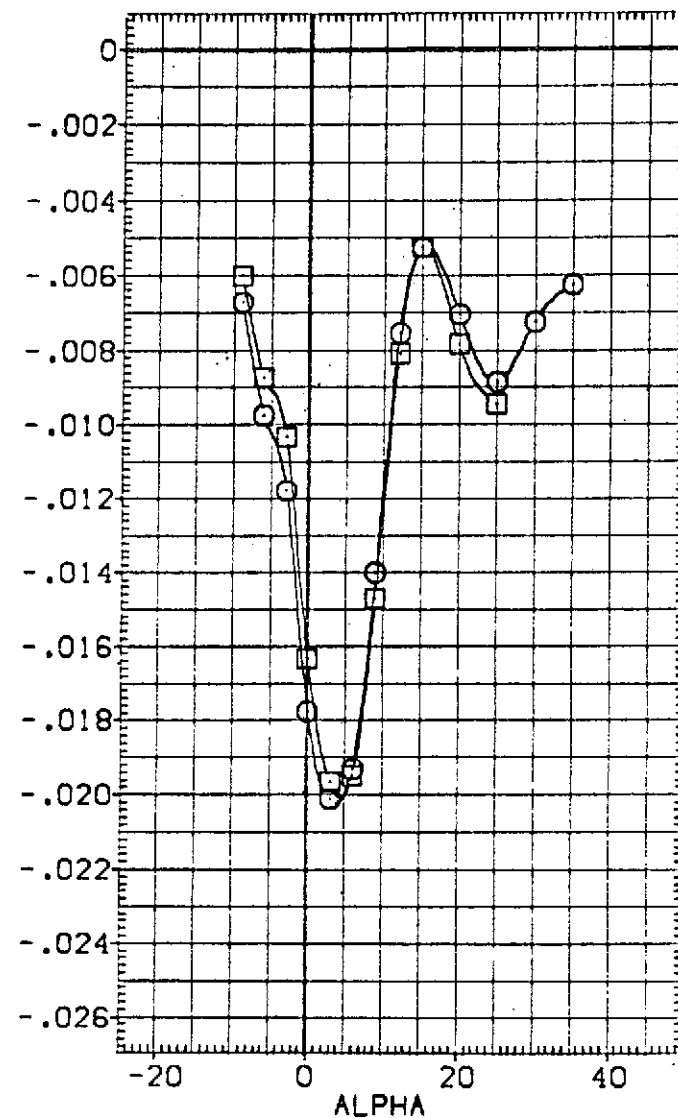
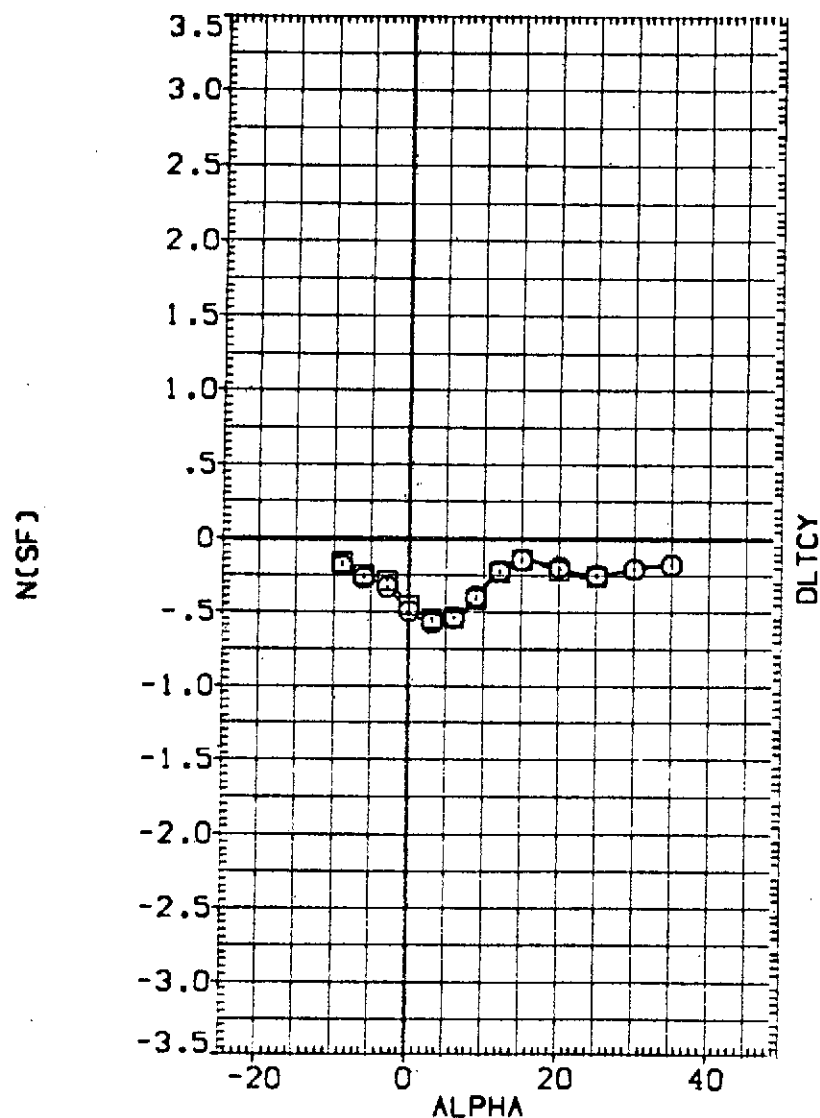


FIG. 06 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N52

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q (PSF) | PC RCS | TC RCS | T/DA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|-----------|--------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | SQ.FT. |
| (RHL011) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL020) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) | 150.000 | 158.000 | 73.000 | 47.500 | SREF | 936.6800 | IN. |
| | | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | | YMRP | .0000 | IN. |
| | | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | | SCALE | .0100 | |

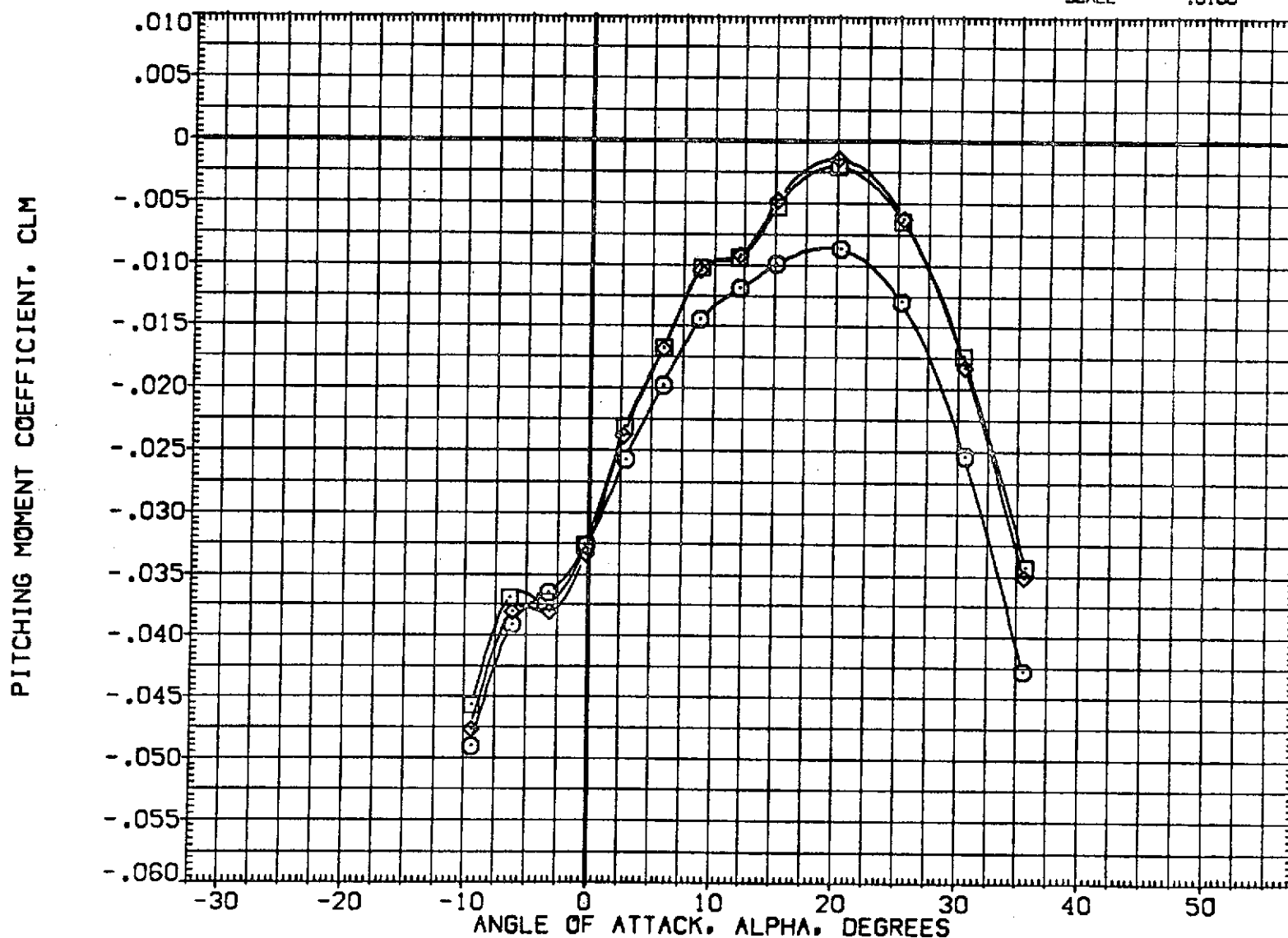


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|--------|-----------------------|------------------|
| (RHL004) | QAB2 CFHT113 MODEL 32-0 OR8 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL011) | QAB2 CFHT113 MODEL 32-0 OR8 V/N85 [AIR] | 150.000 | 158.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL020) | QAB2 CFHT113 MODEL 32-0 OR8 V/N85 [AIR] | 150.000 | 158.000 | 73.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

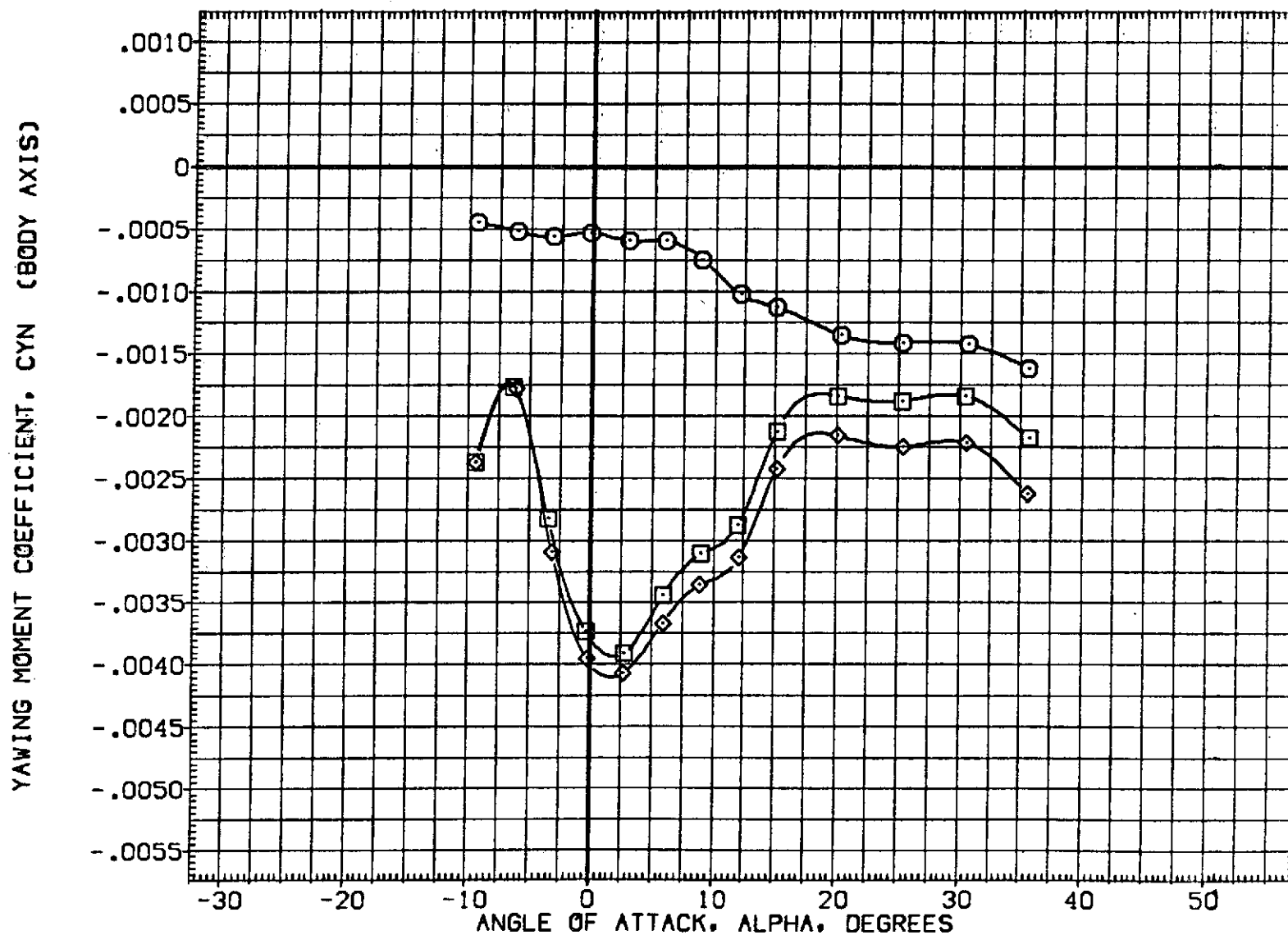


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL01) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 159.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL02) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 159.000 | 73.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

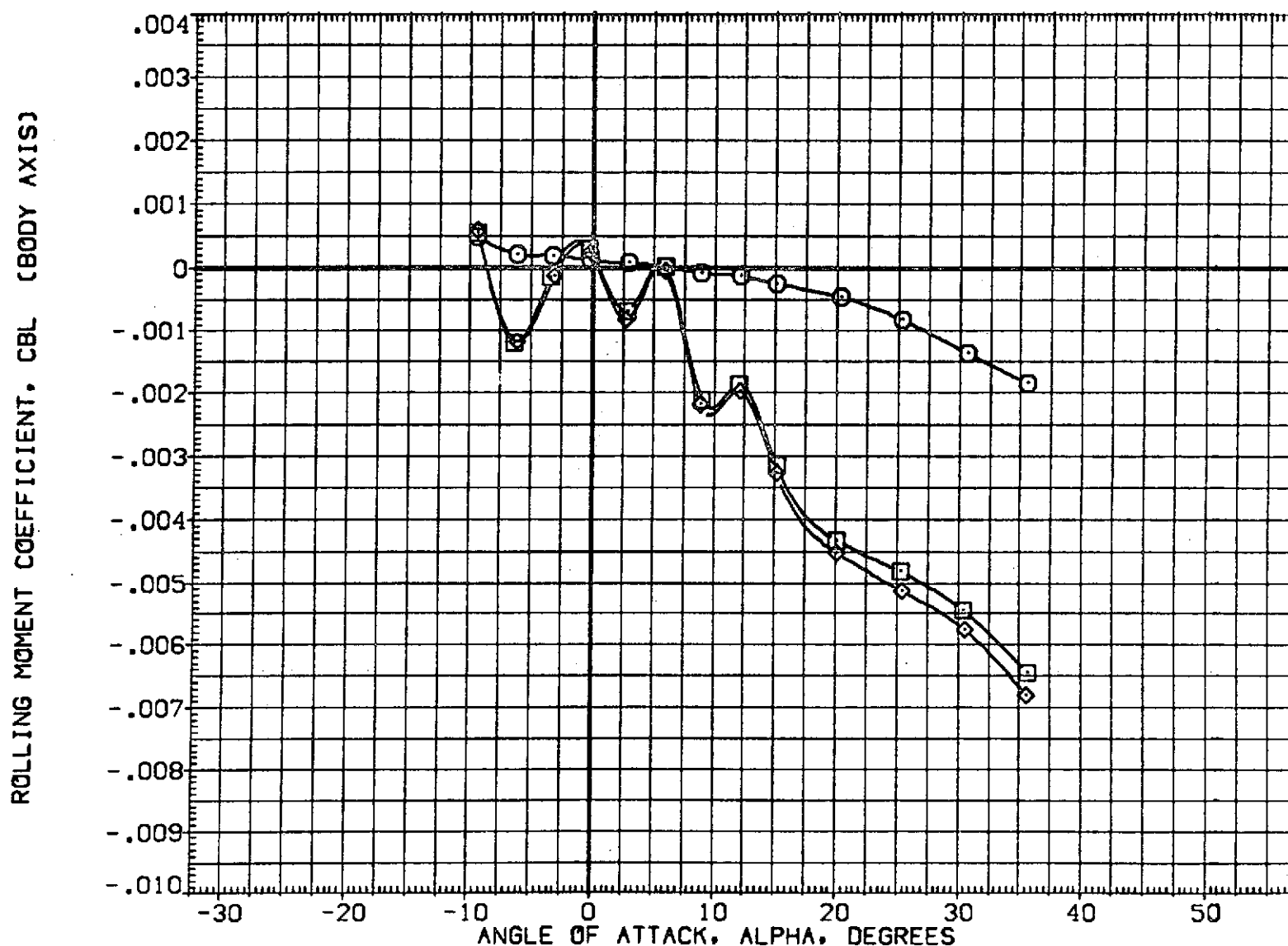


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|--------|-----------------------|------------------|
| [RHL04] | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHL011] | 0A82 CFHT113 MODEL 32-0 ORB V/N85 [AIR] | 150.000 | 158.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| [RHL020] | 0A82 CFHT113 MODEL 32-0 ORB V/N85 [AIR] | 150.000 | 158.000 | 73.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRF | 1076.7000 IN. |
| | | | | | | YMRF | .0000 IN. |
| | | | | | | ZMRF | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

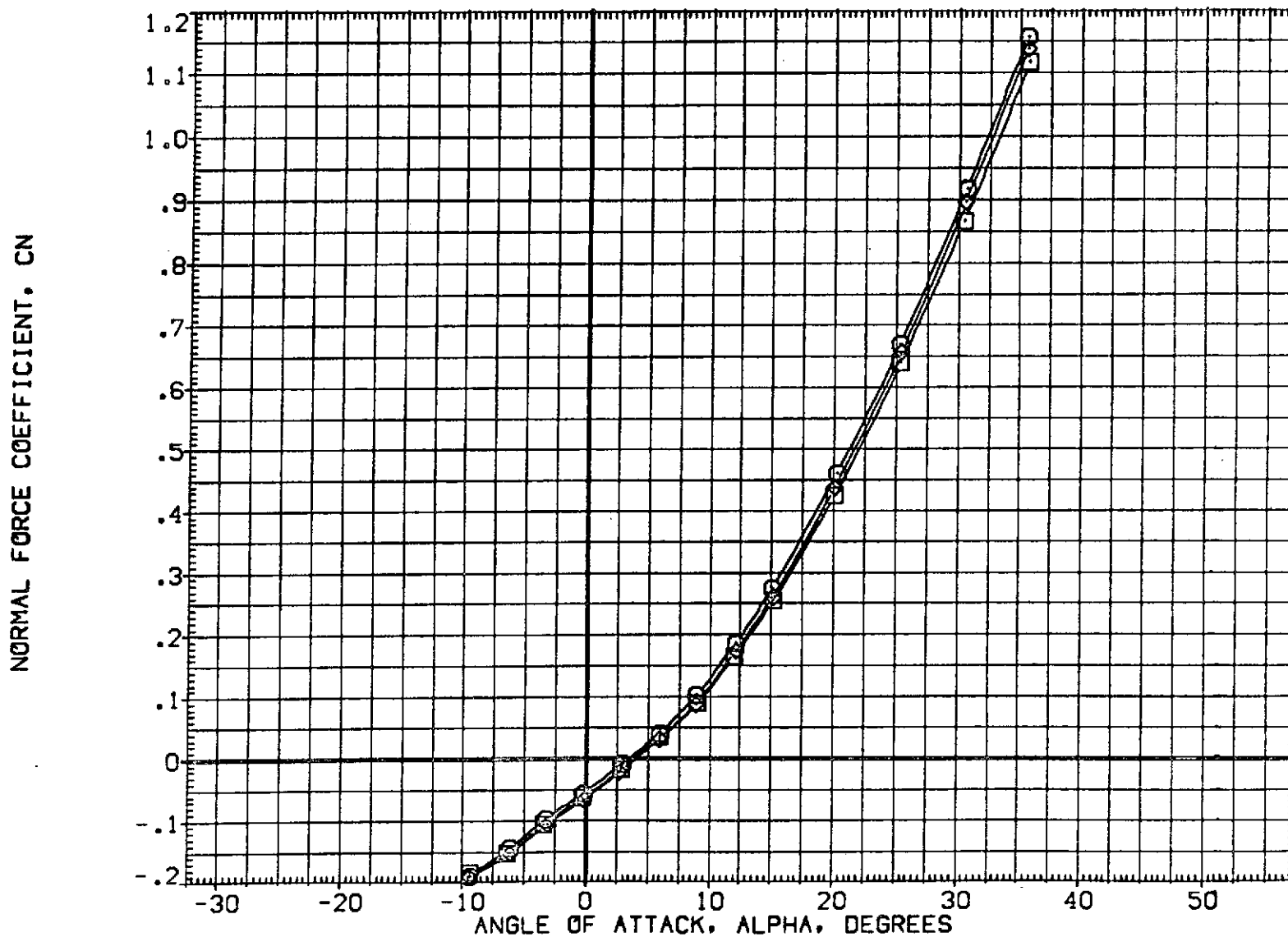


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | RCS OFF | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 GRB V/N85 | | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL011) | 0A82 CFHT113 MODEL 32-0 GRB V/N85 | {AIR} | 150.000 | 158.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| (RHL020) | 0A82 CFHT113 MODEL 32-0 GRB V/N85 | {AIR} | 150.000 | 158.000 | 73.000 | 47.500 | BREF 936.6800 IN. |
| | | | | | | | XMRP 1076.7000 IN. |
| | | | | | | | YMRP .0000 IN. |
| | | | | | | | ZMRP 375.0000 IN. |
| | | | | | | | SCALE .0100 |

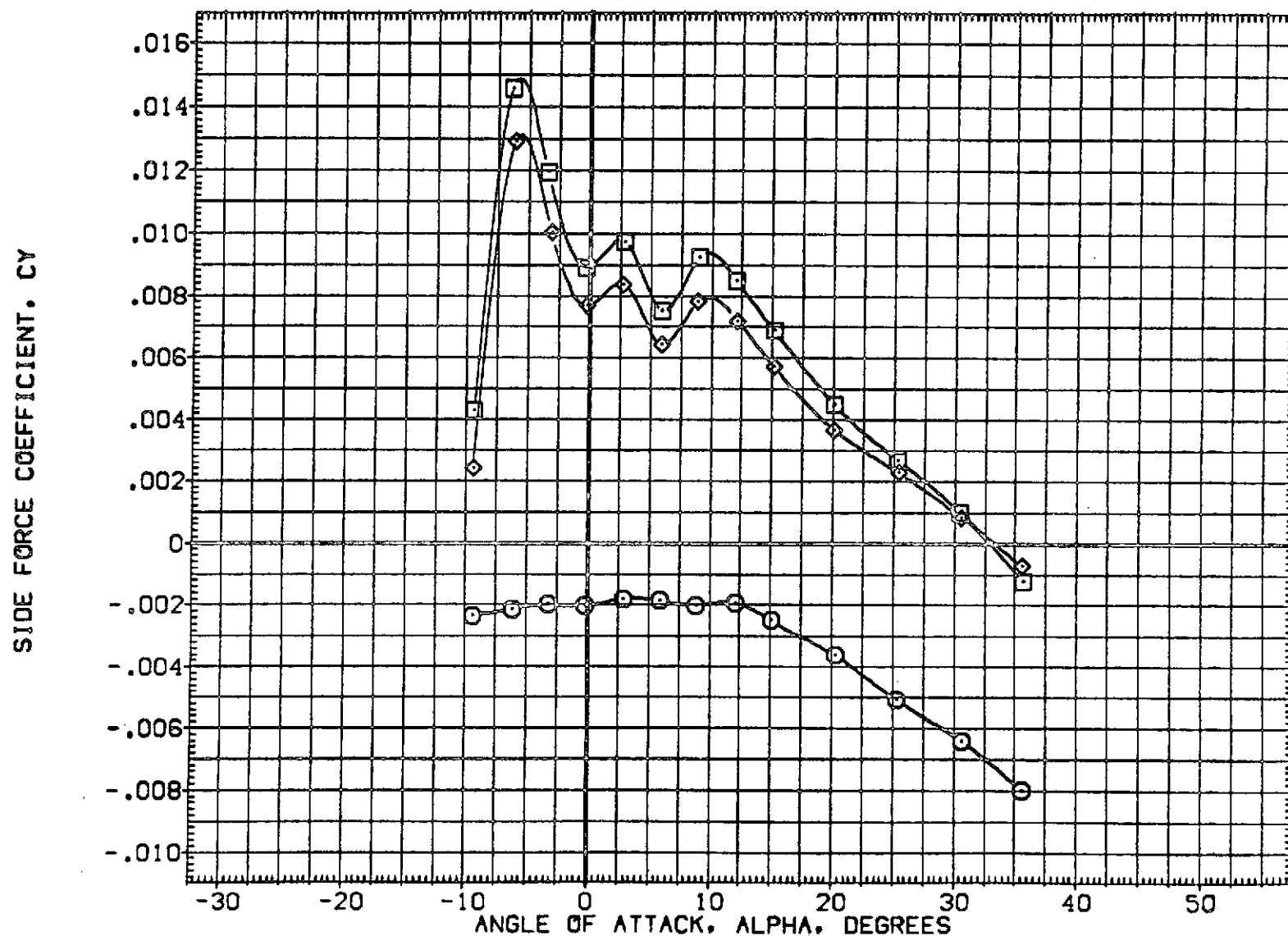


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | 0AB2 CFHT113 MODEL 32-0 ORS V/N85 | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL011) | 0AB2 CFHT113 MODEL 32-0 ORS V/N85 | 150.000 | 158.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL020) | 0AB2 CFHT113 MODEL 32-0 ORS V/N85 | 150.000 | 158.000 | 73.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

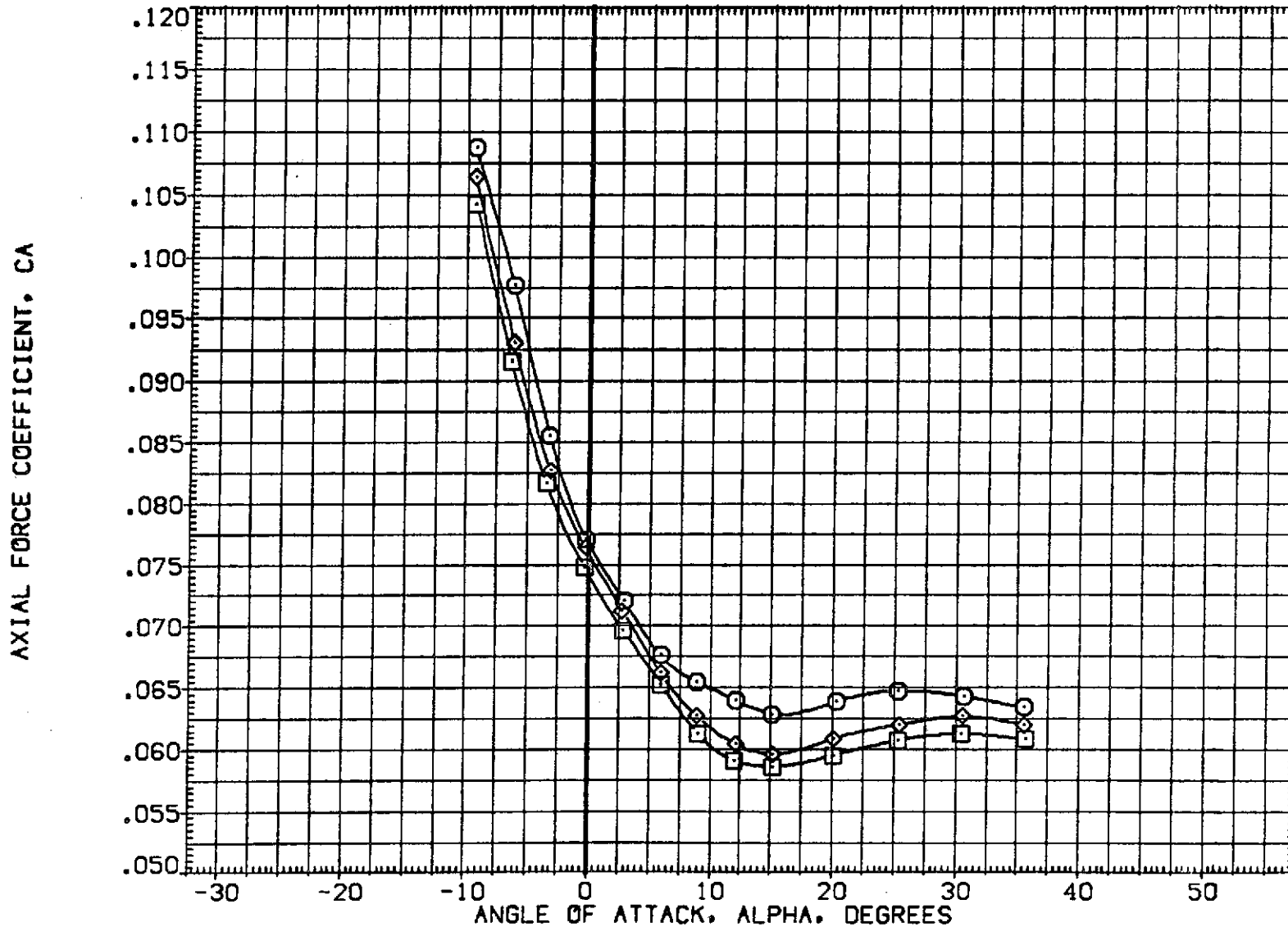


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| {CHLC11} | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | {AIR} |
| {CHLC20} | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | {AIR} |

| Q(PSF) | PCRC | TCRC | T/OA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 SO.FT. |
| 150.000 | 158.000 | 73.000 | 47.500 | LREF | 474.6100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

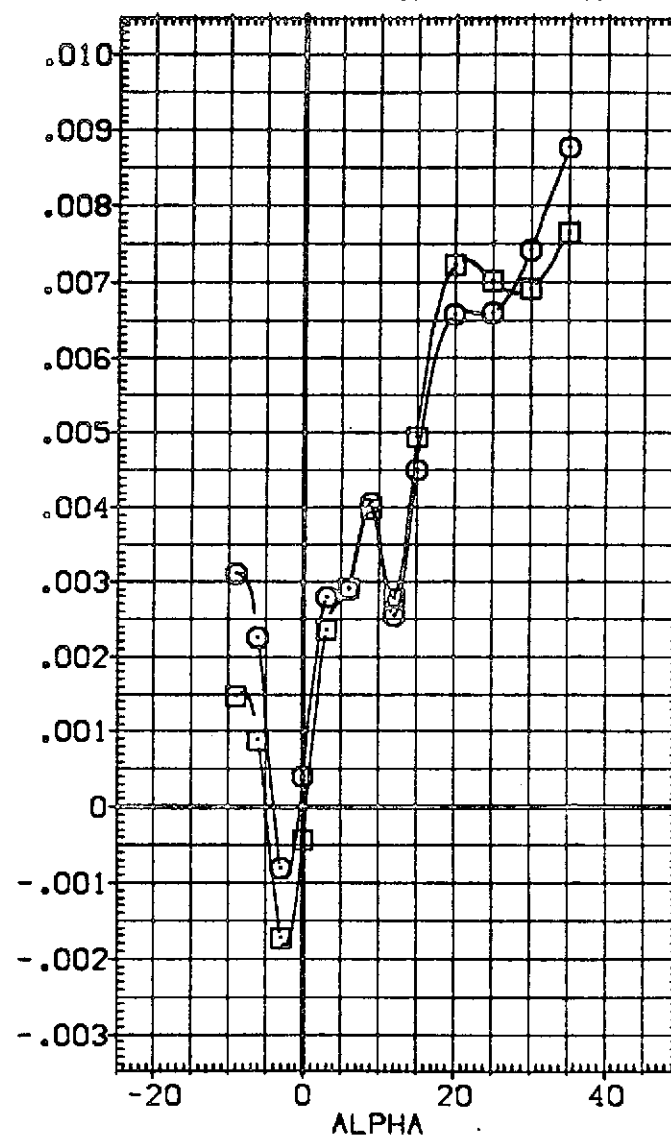
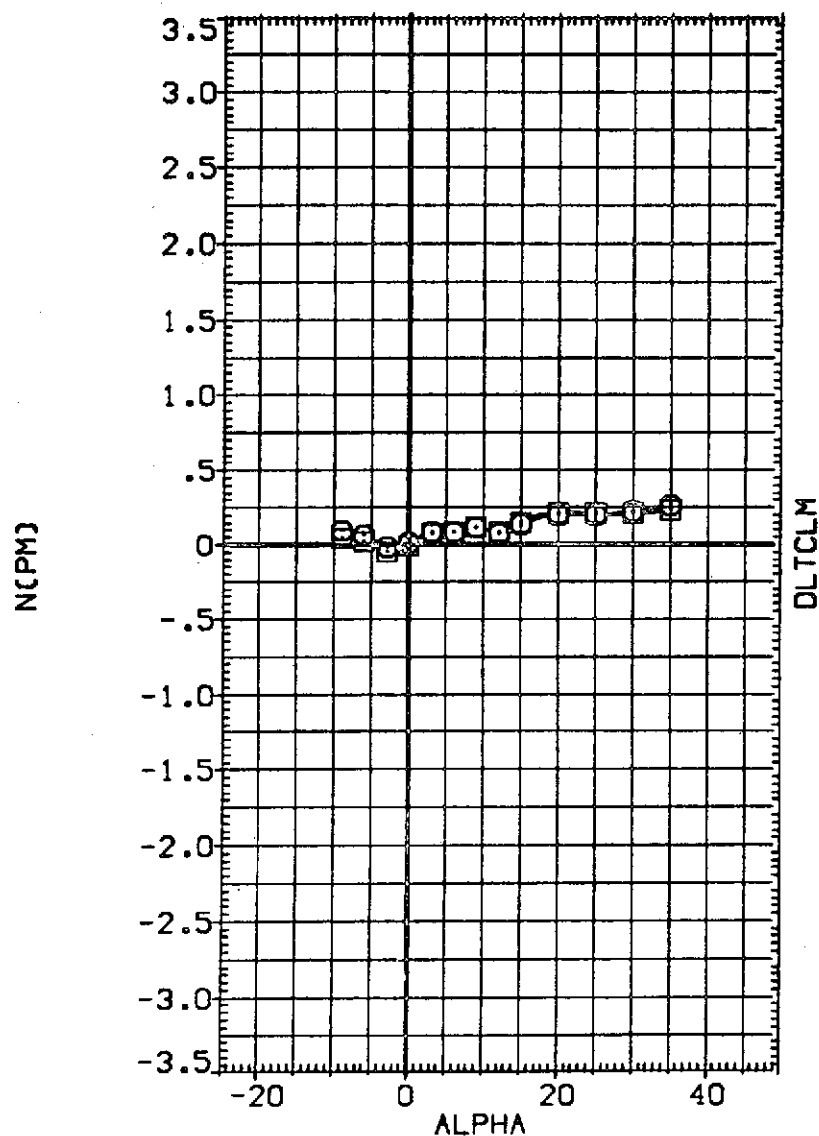


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

{CHLC11} □ QAB2 CFHT113 MODEL 32-0 ORB V/N85 {AIR}
 {CHLC20} □ QAB2 CFHT113 MODEL 32-0 ORB V/N85 {AIR}

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 158.000 | 73.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

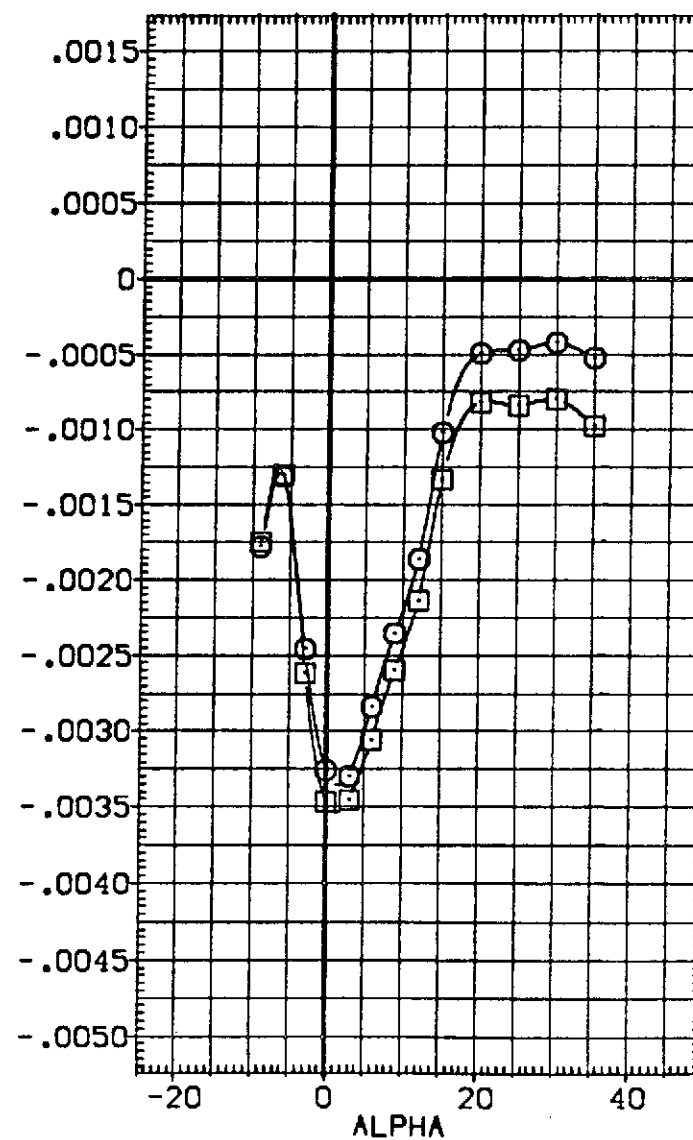
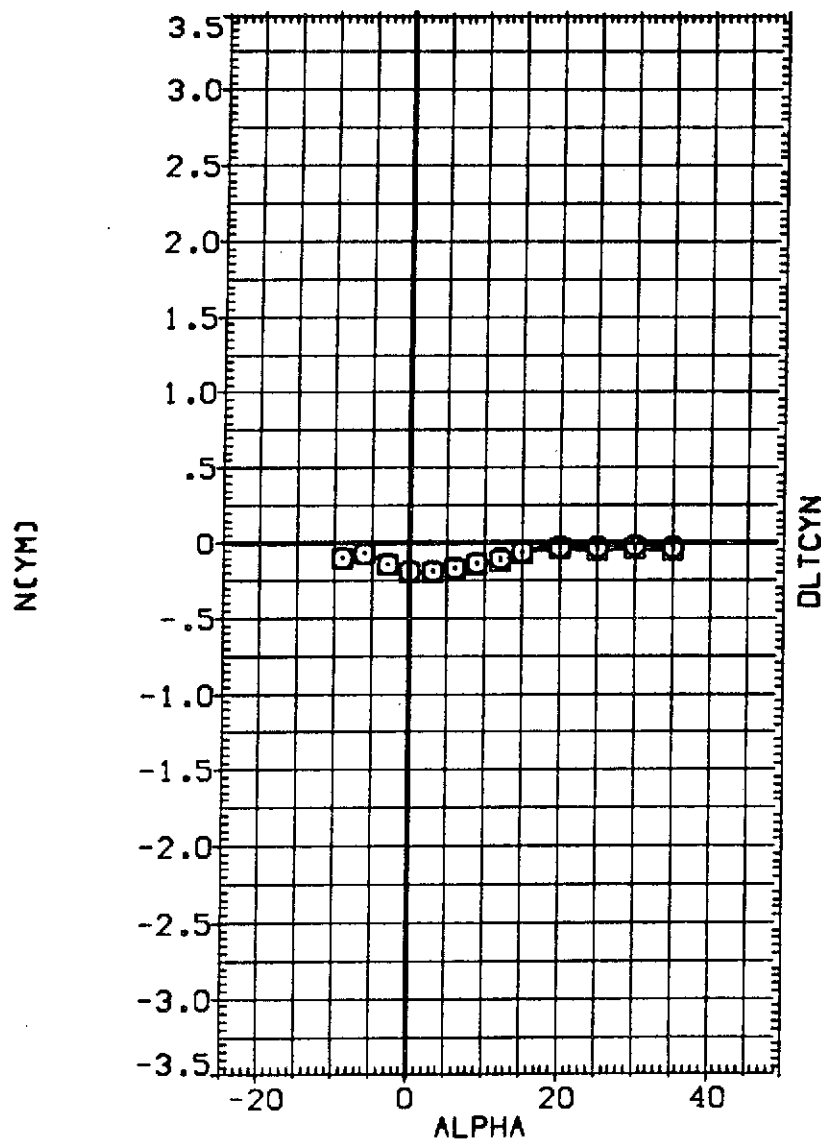


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC11) | ○ 0A82 CFHT113 MODEL 32-0 DRB V/N85 (AIR) |
| (CHLC20) | □ 0A82 CFHT113 MODEL 32-0 DRB V/N85 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 158.000 | 73.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

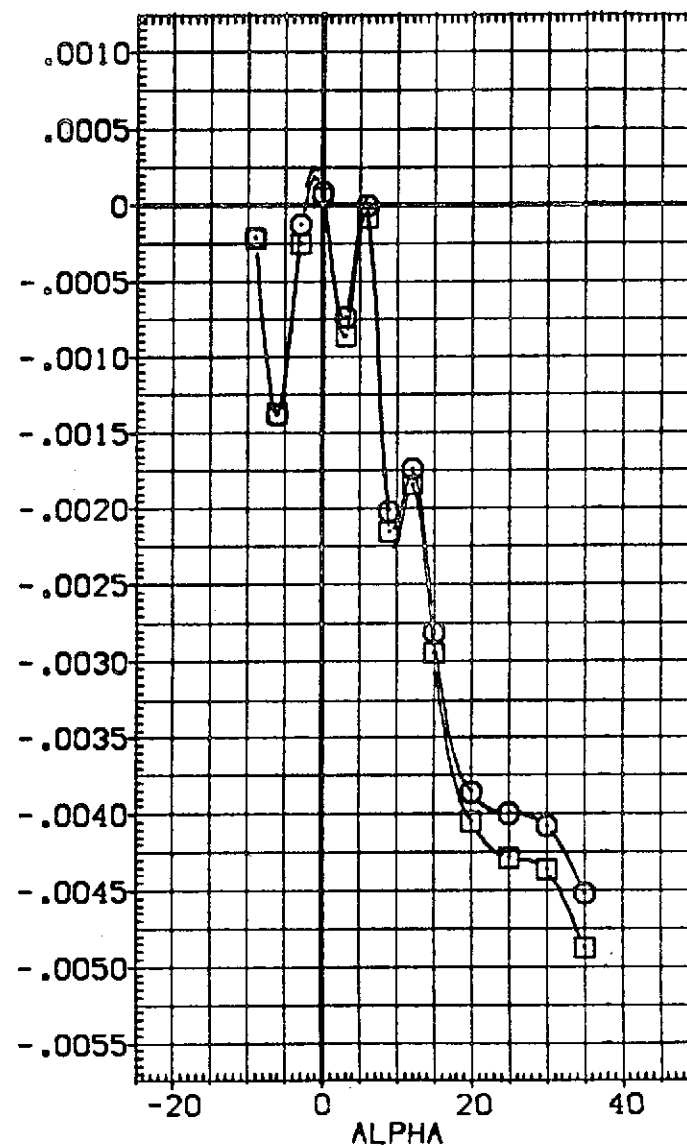
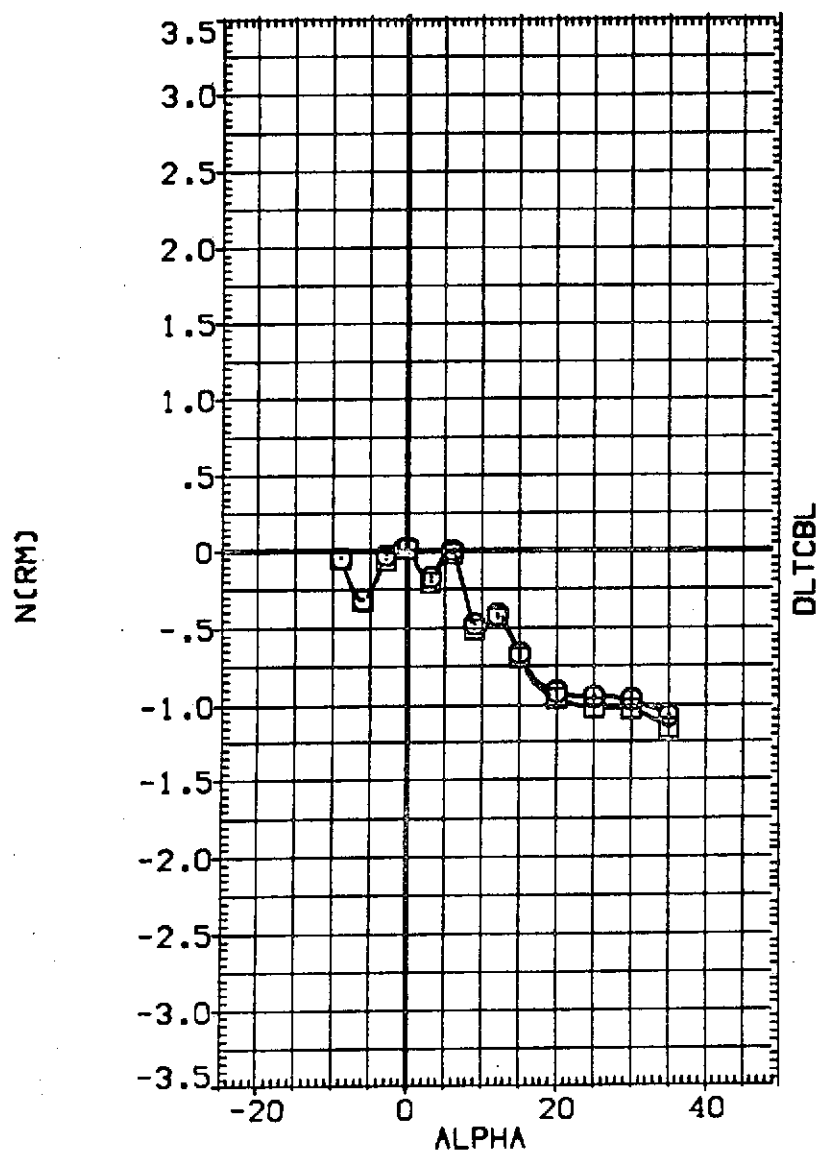


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85
(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 {CHLC11} □ GA82 CFHT113 MODEL 32-0 ORB V/N85 {AIR}
 {CHLC20} □ GA82 CFHT113 MODEL 32-0 ORB V/N85 {AIR}

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|---------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 158.000 | 73.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

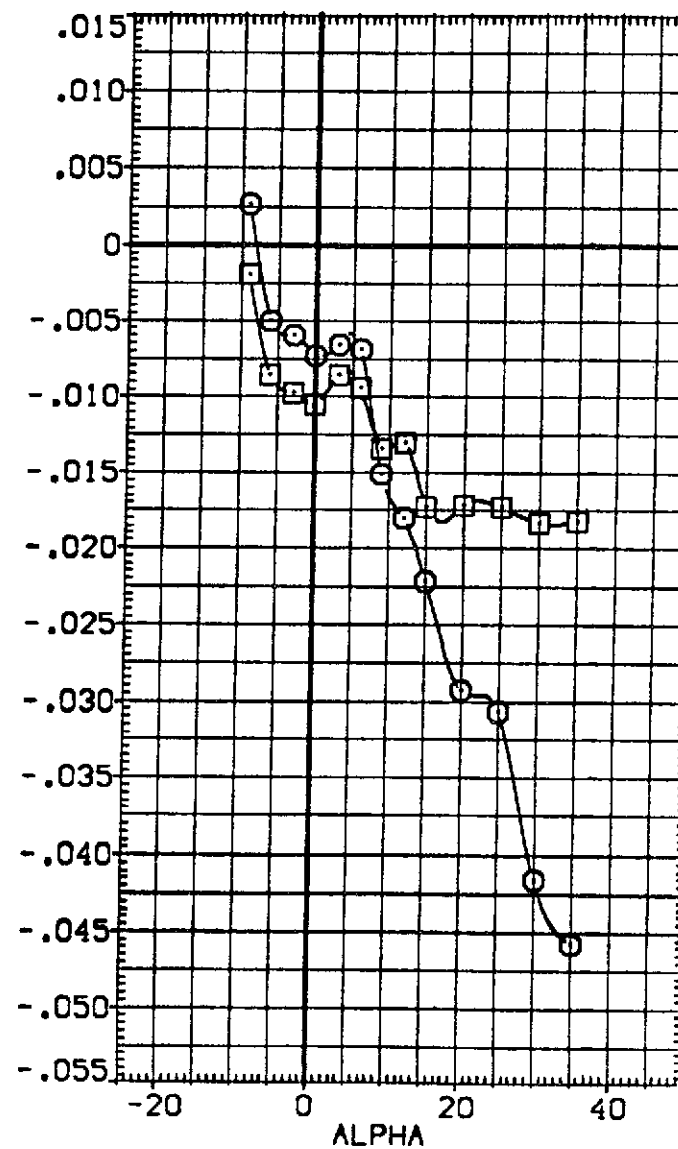
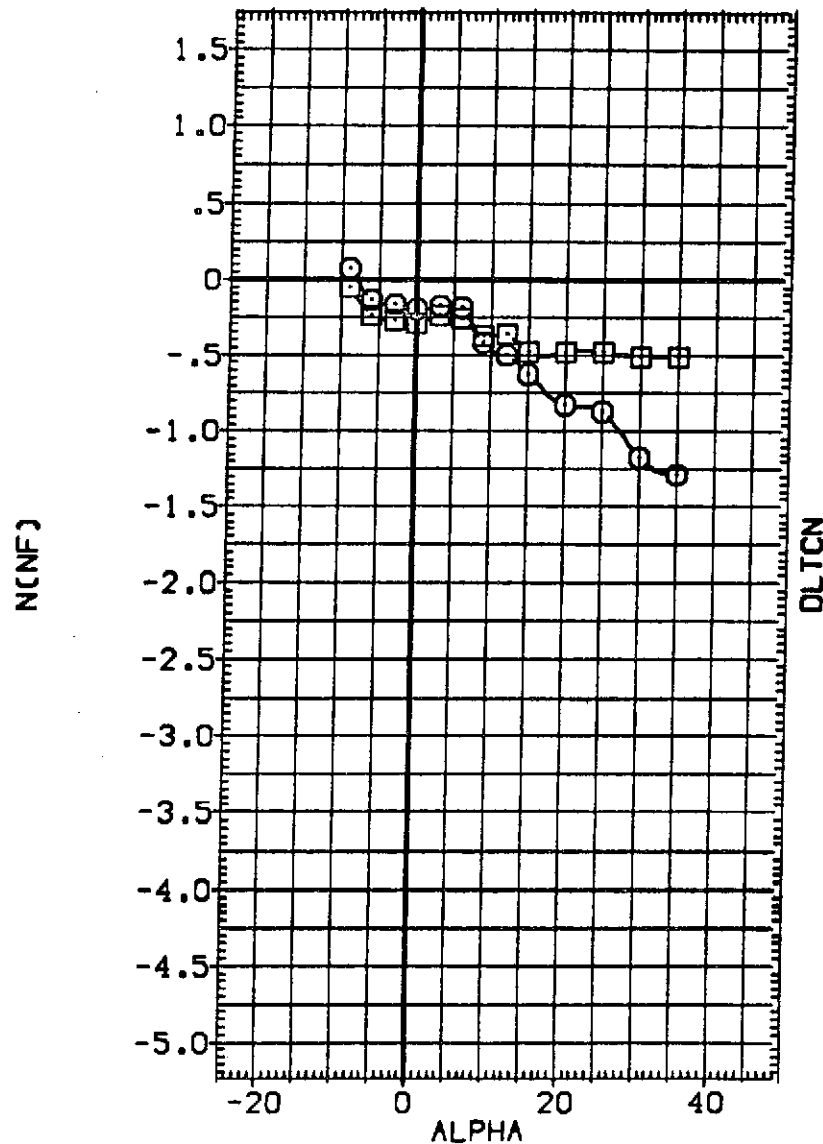


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85
 (A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC11] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) |
| [CHLC20] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 158.000 | 73.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 933.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

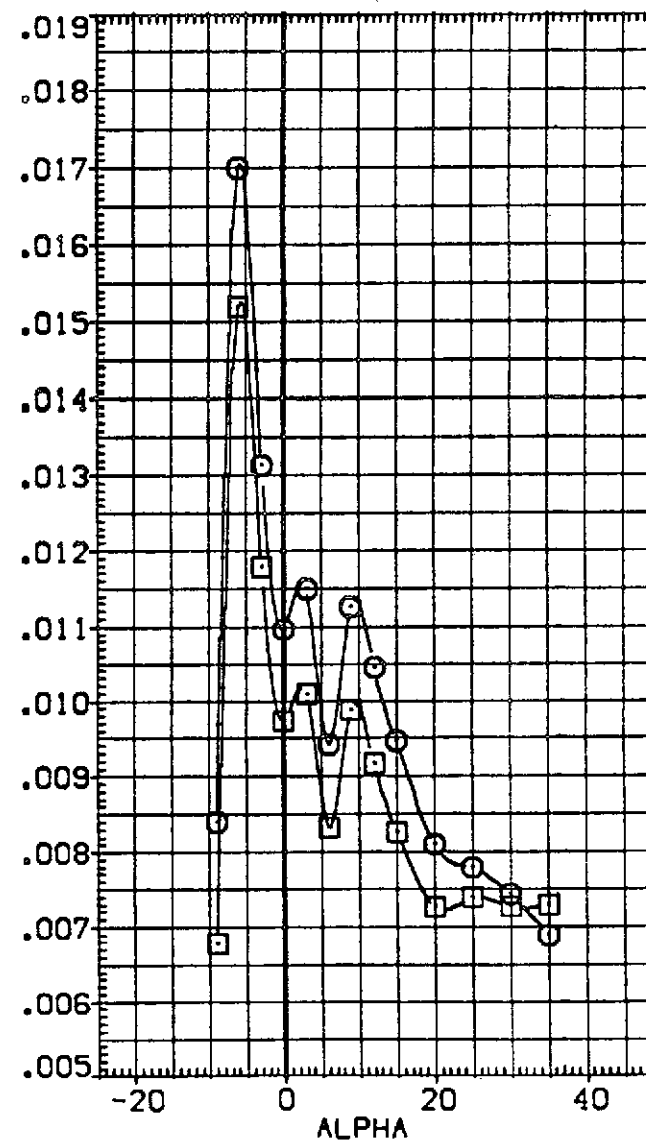
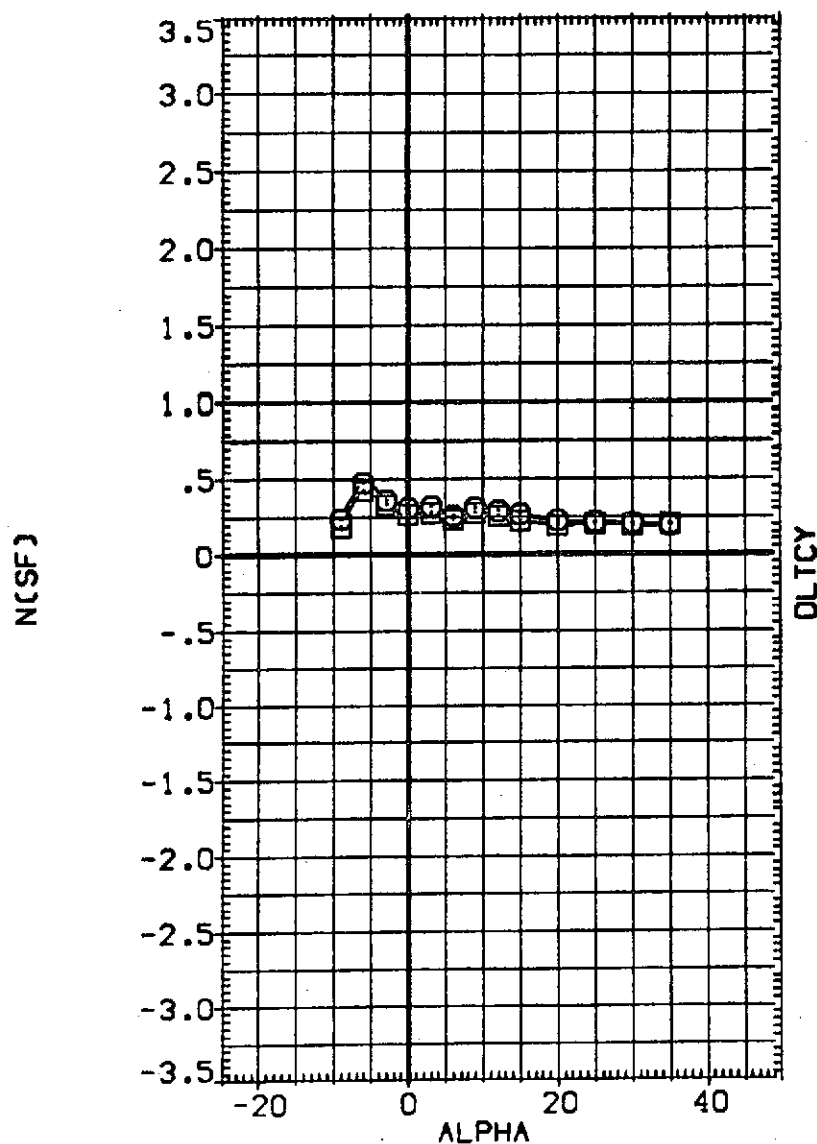


FIG. 07 REPEATABILITY OF DATA WITH RCS ON USING AIR, JETS N85
 (A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|---------|
| (RHL004) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL001) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL003) | QAB2 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

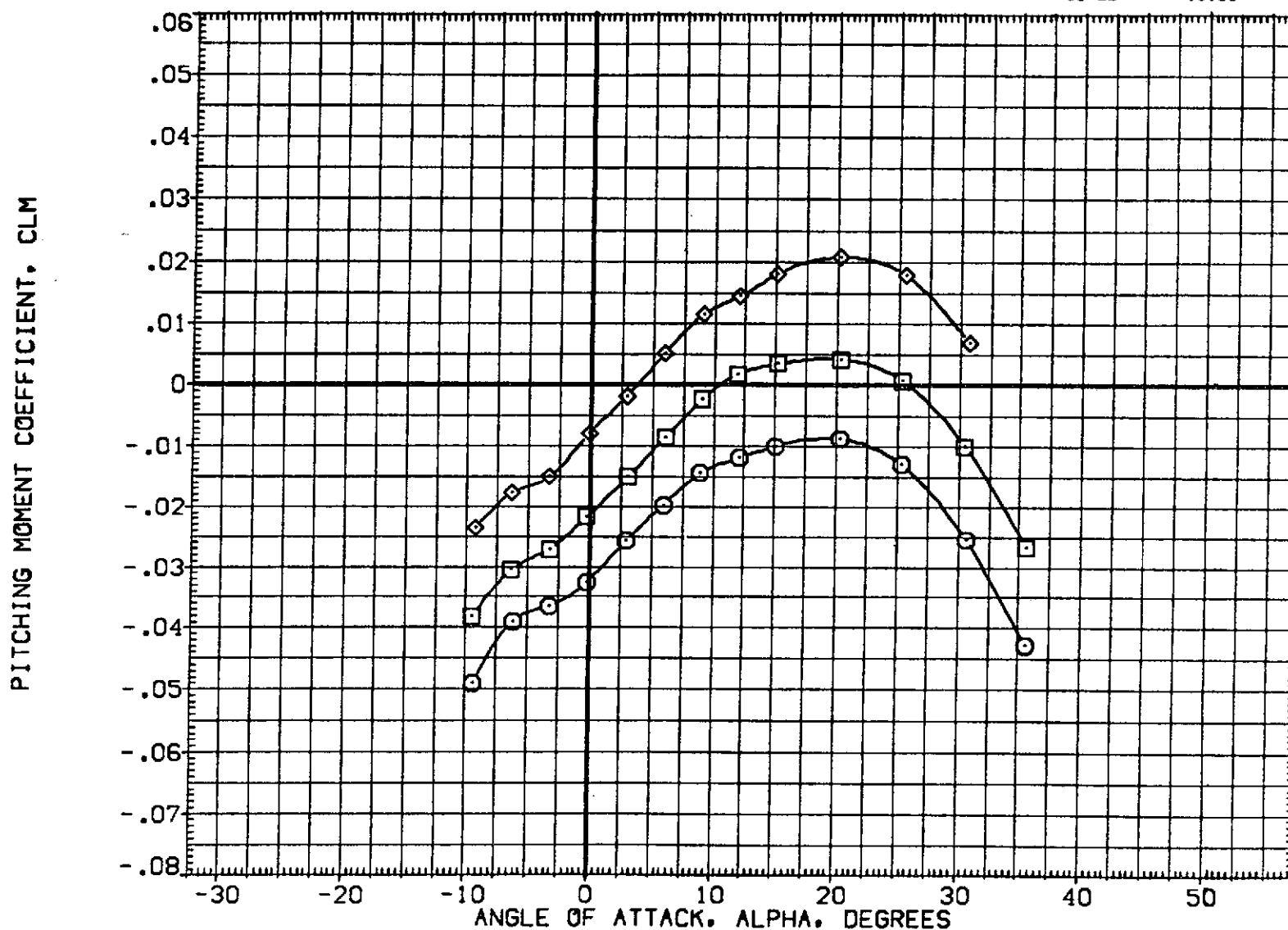


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| [RHL04] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHL001] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 [AIR] | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| [RHL003] | QAB2 CFHT113 MODEL 32-0 ORB V/N49N50 [AIR] | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 935.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

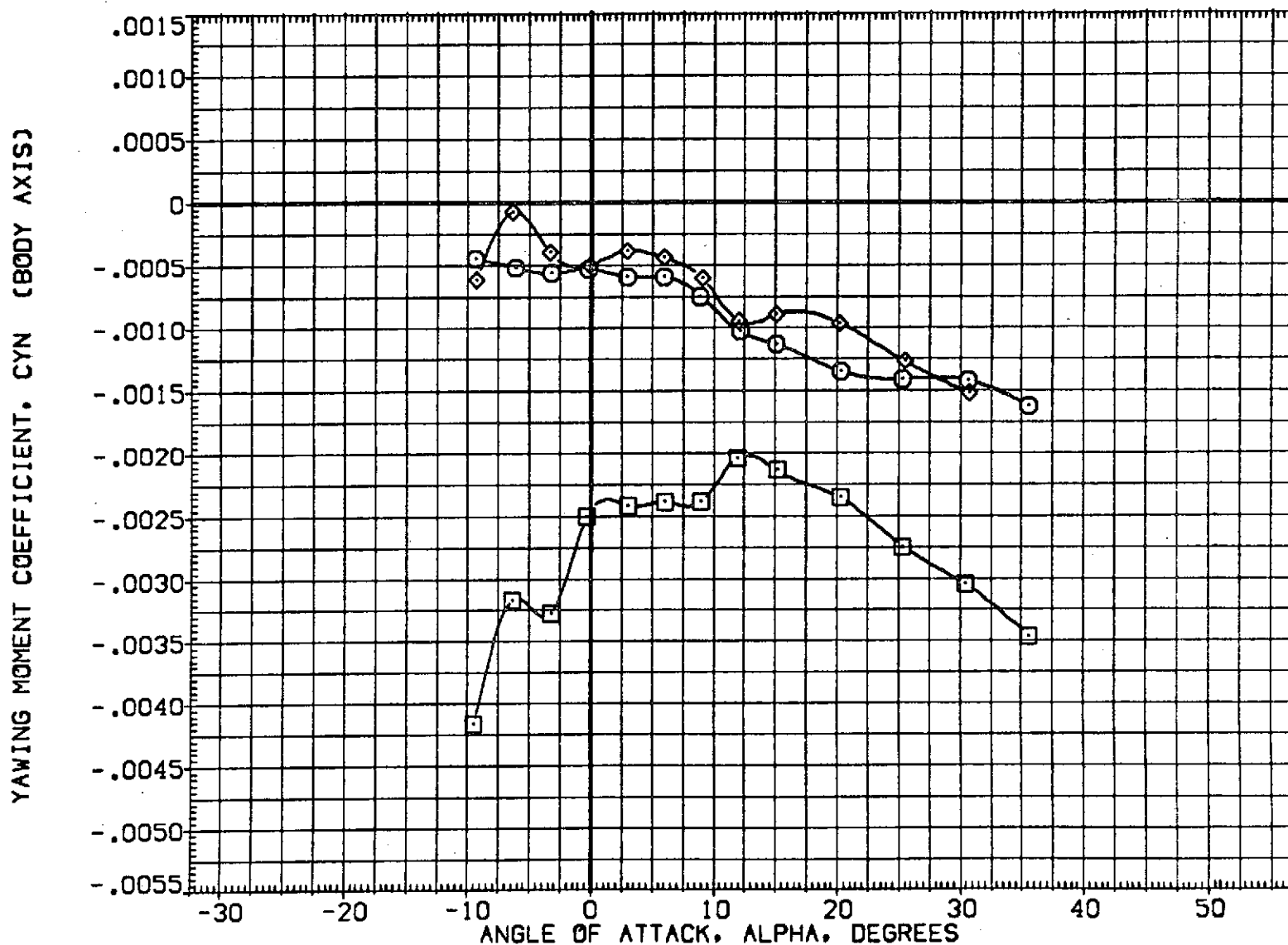


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/OA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|---------|
| (RHL004) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL001) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL003) | QAB2 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

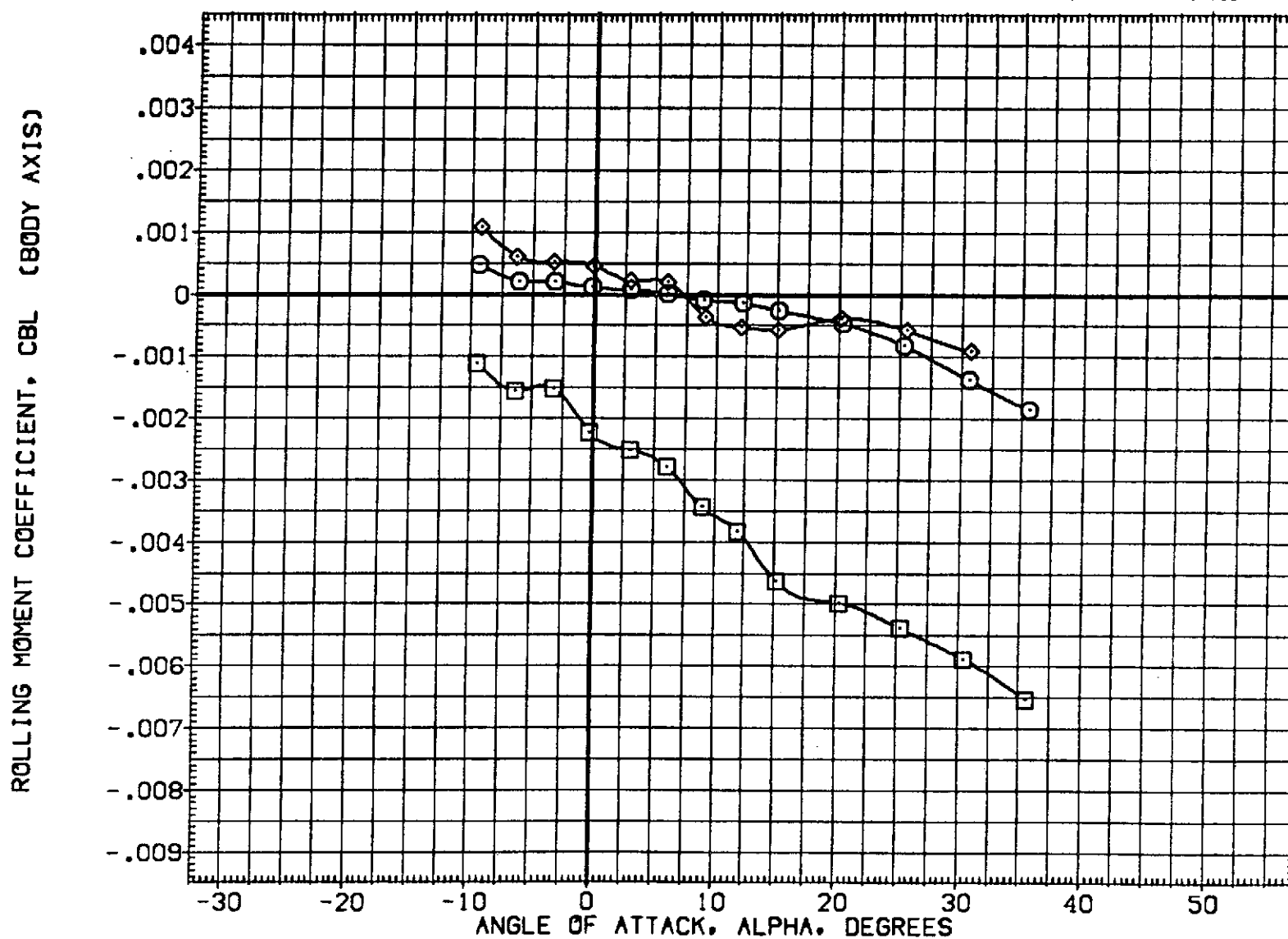


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 DRB V/N49 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL001) | QAB2 CFHT113 MODEL 32-0 DRB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL003) | QAB2 CFHT113 MODEL 32-0 DRB V/N49N50 (AIR) | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

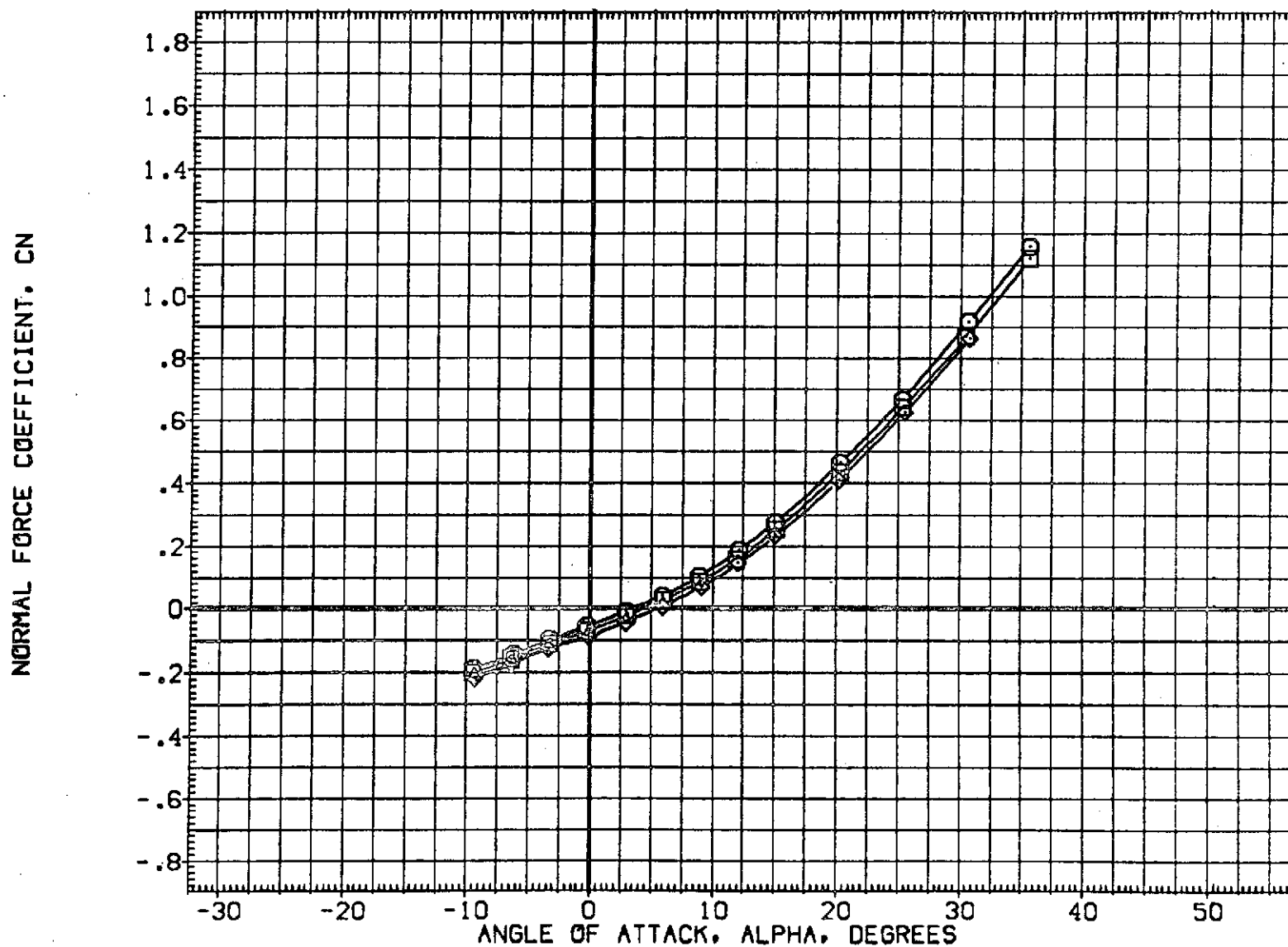


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL004) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL001) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL003) | QAB2 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

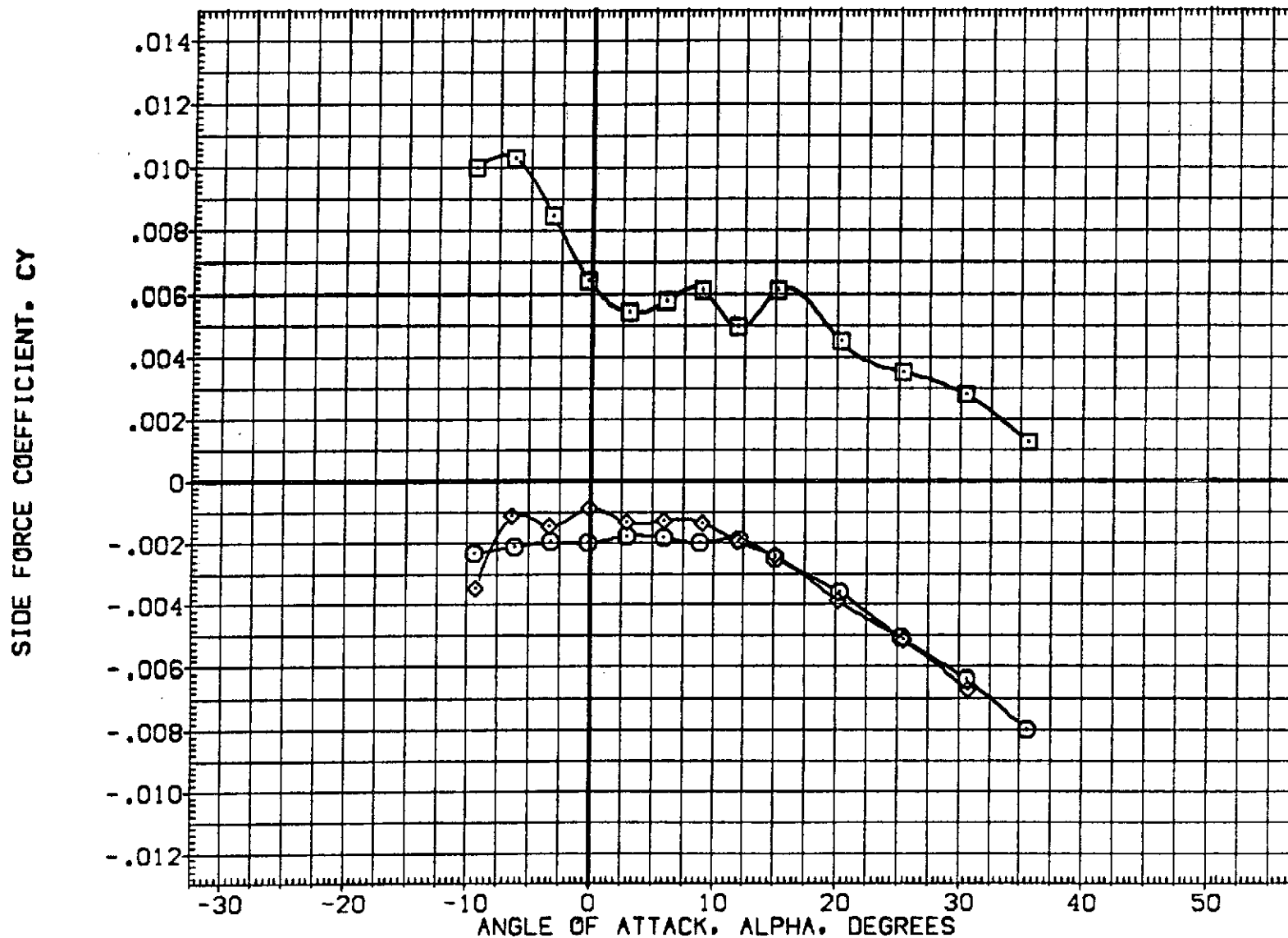


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|--------|
| (R4L004) | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2630.0000 | SQ.FT. |
| (R4L001) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 [AIR] | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| (R4L003) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49N50 [AIR] | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

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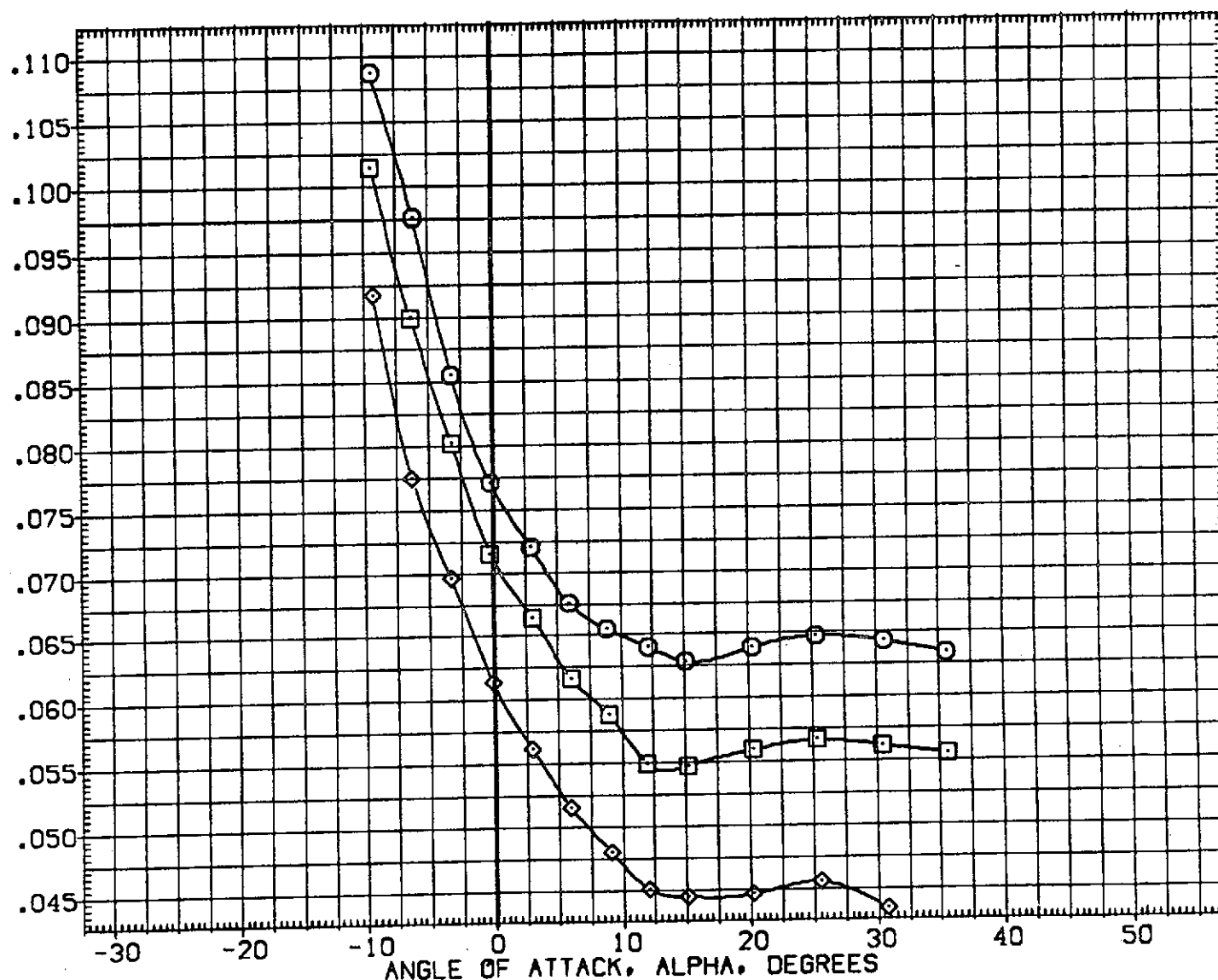


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC01) | □ OAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC03) | □ OAB2 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 155.000 | 69.000 | 47.500 | SREF | 2690.0000 | 50.FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

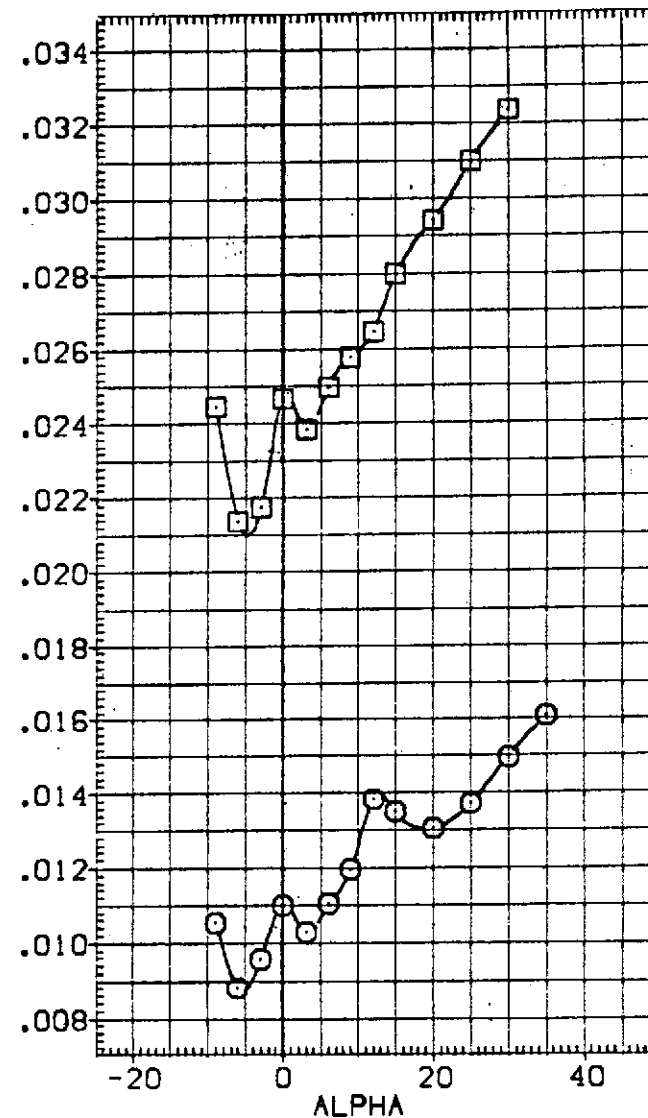
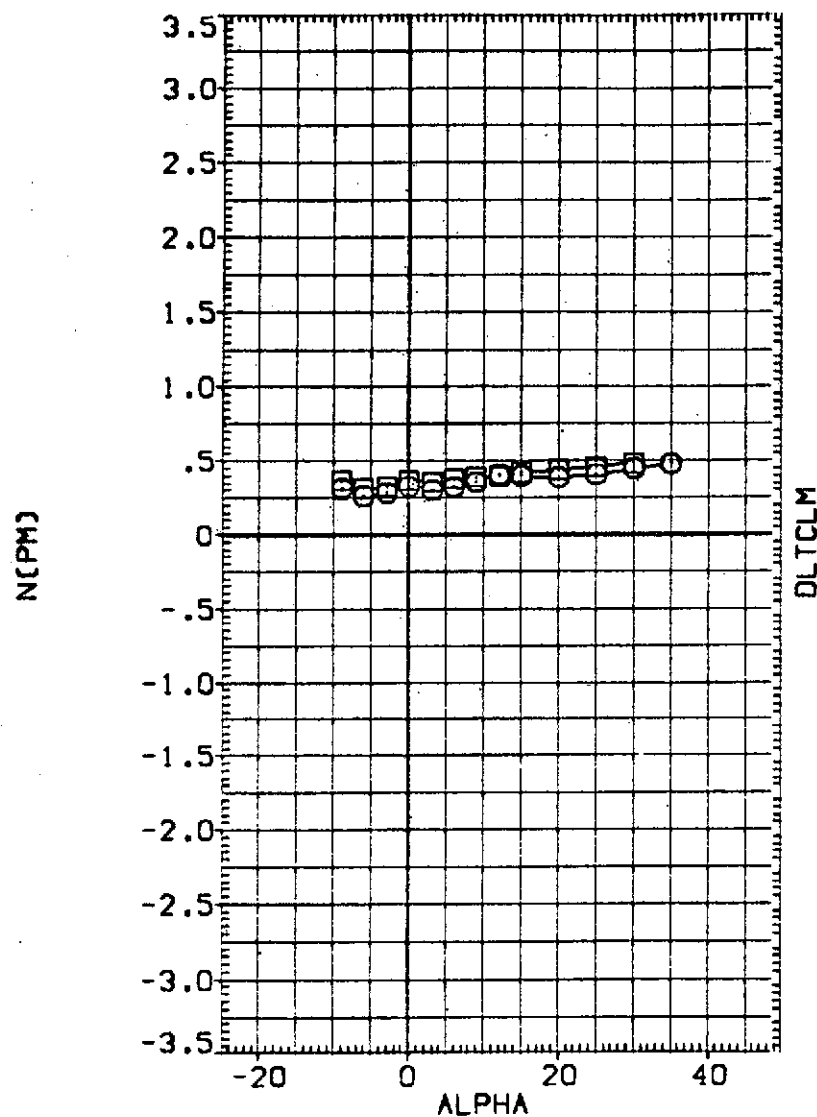


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| [CHLC01] ○ | 0A82 CFHT113 MODEL 32-0 ORB W/N49 (AIR) |
| [CHLC03] □ | 0A82 CFHT113 MODEL 32-0 ORB W/N49N50 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

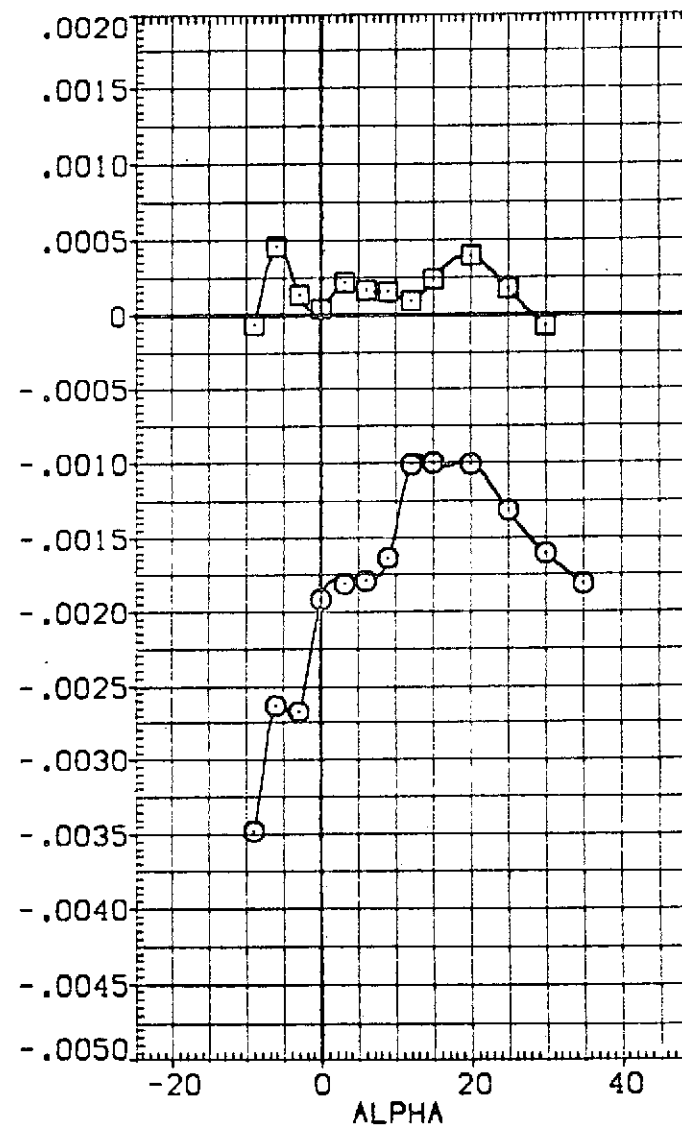
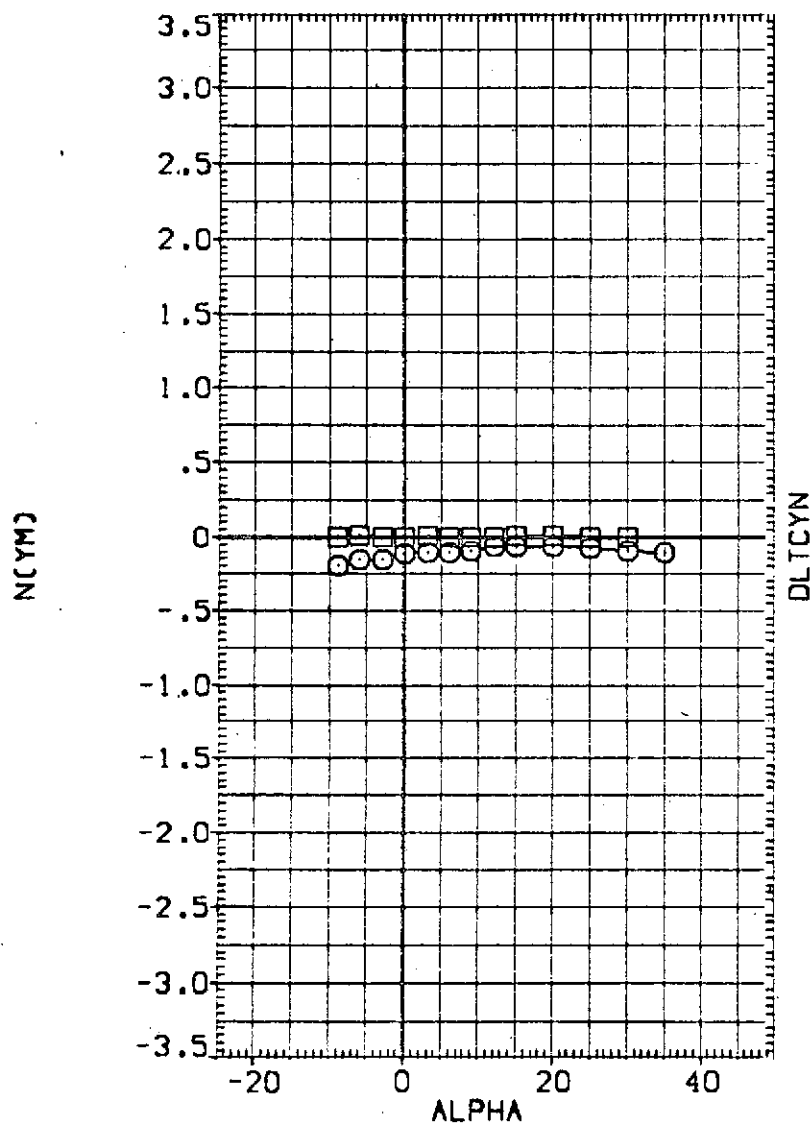


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH.

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC01) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC03) | 0A82 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150,000 | 155,000 | 68,000 | 47,500 | SREF | 2690.0000 SQ.FT. |
| 150,000 | 164,000 | 68,000 | 47,500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

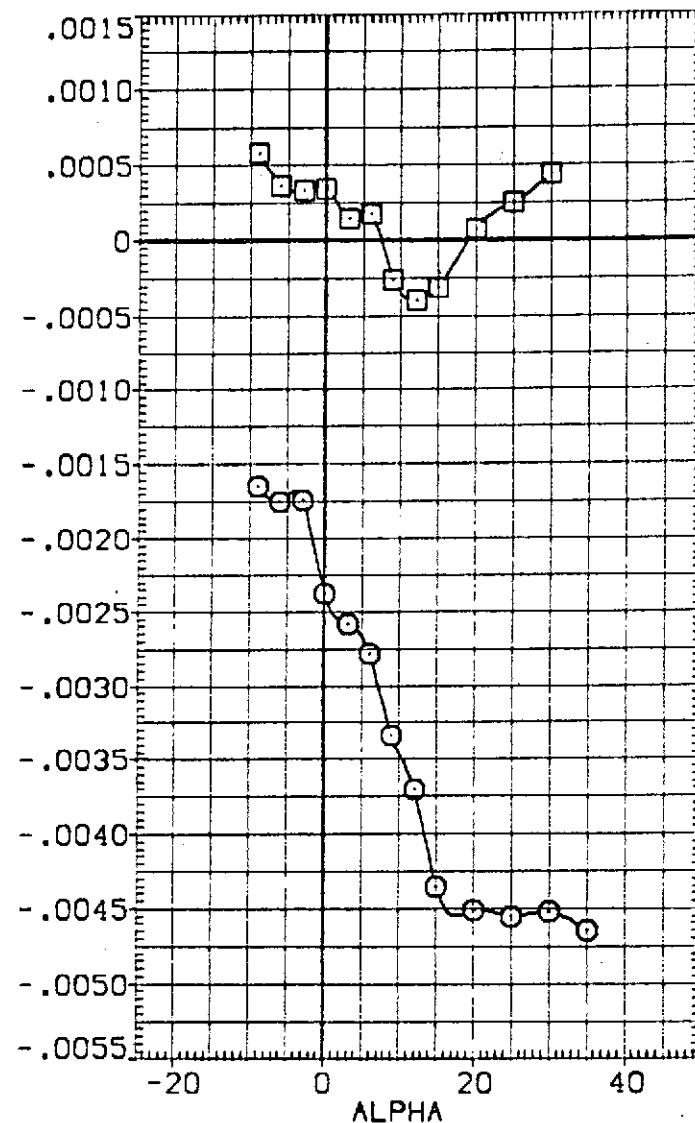
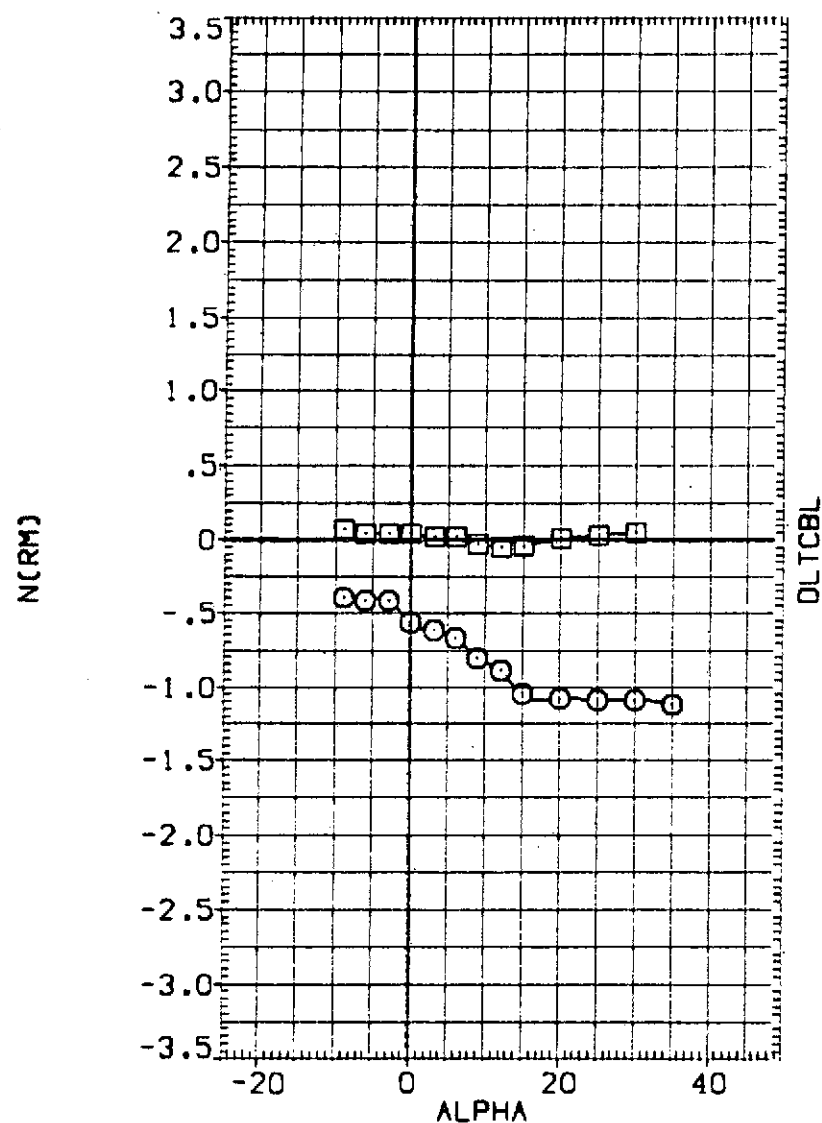


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC01) | ○ 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC03) | □ 0A82 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

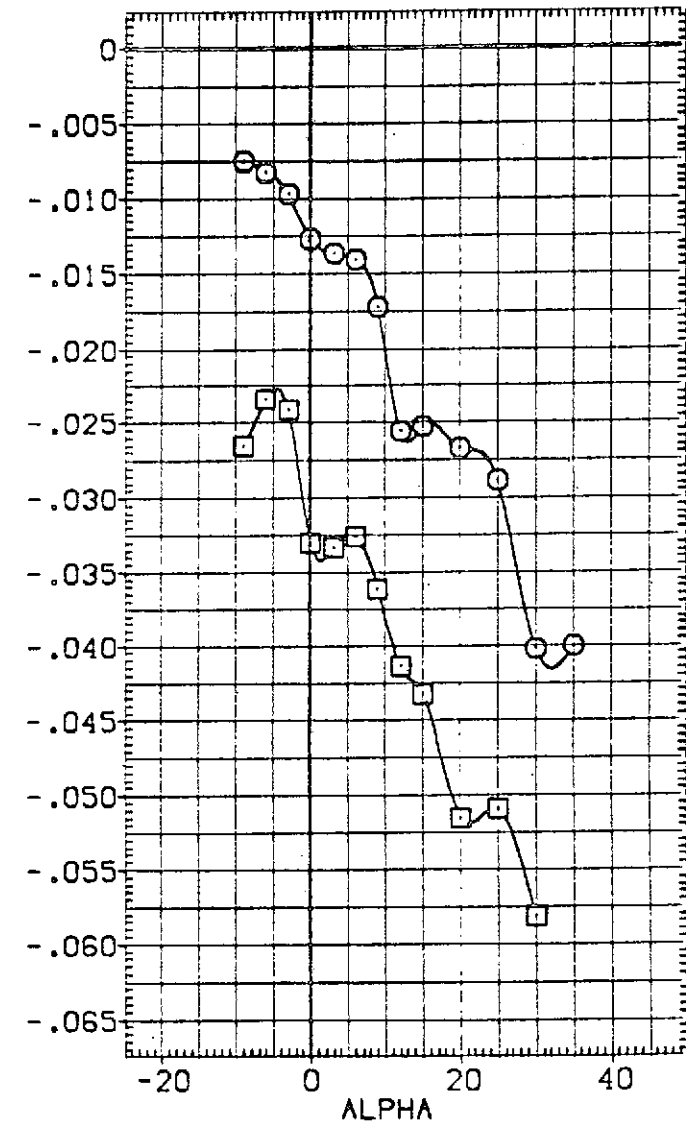
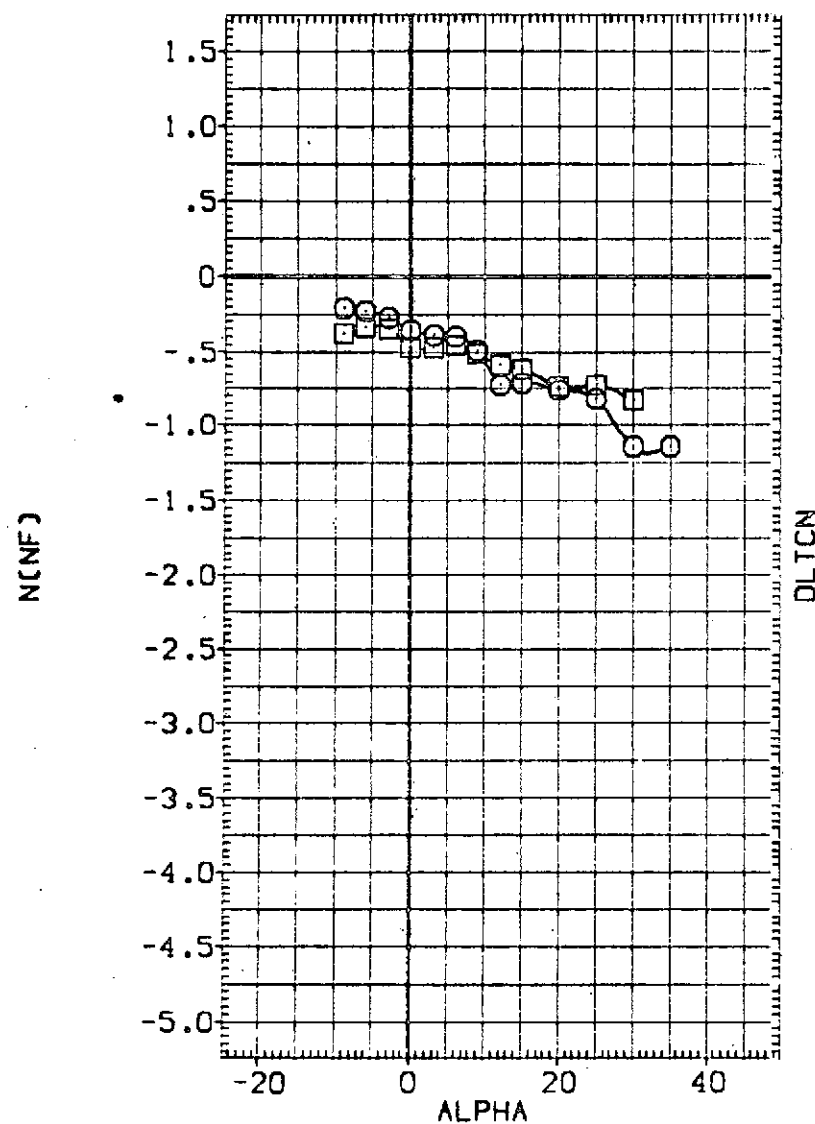


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC01) ○ | 0A82 CFHT113 MODEL 32-0 GR8 W/N49 (AIR) |
| (CHLC03) □ | 0A82 CFHT113 MODEL 32-0 GR8 W/N49N50 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 | 90.FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

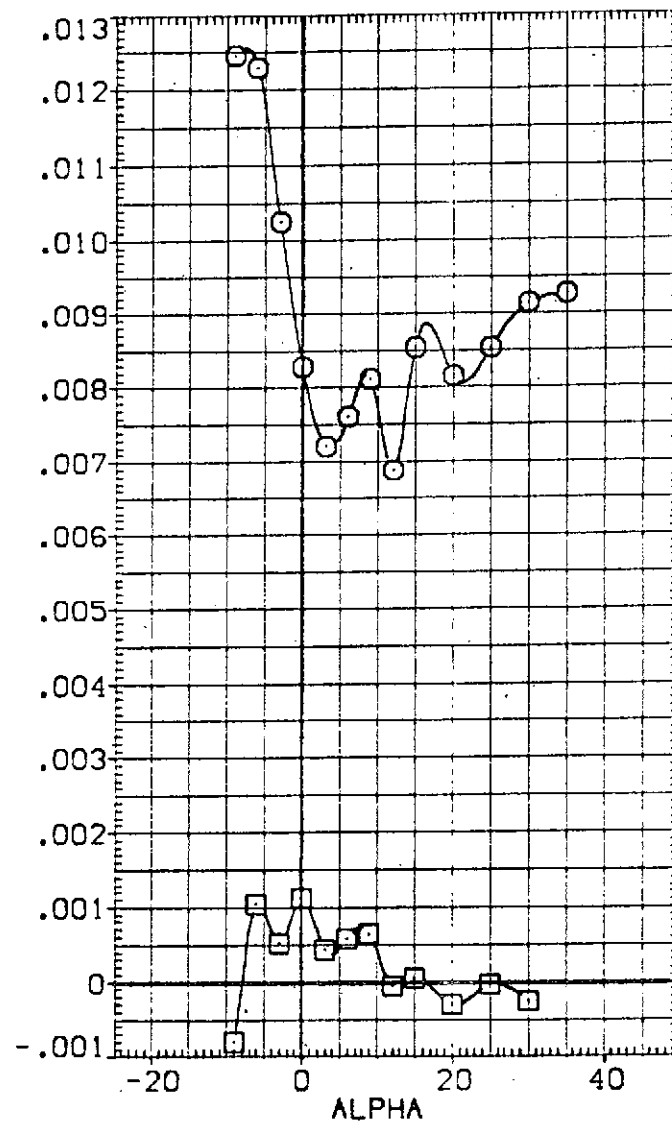
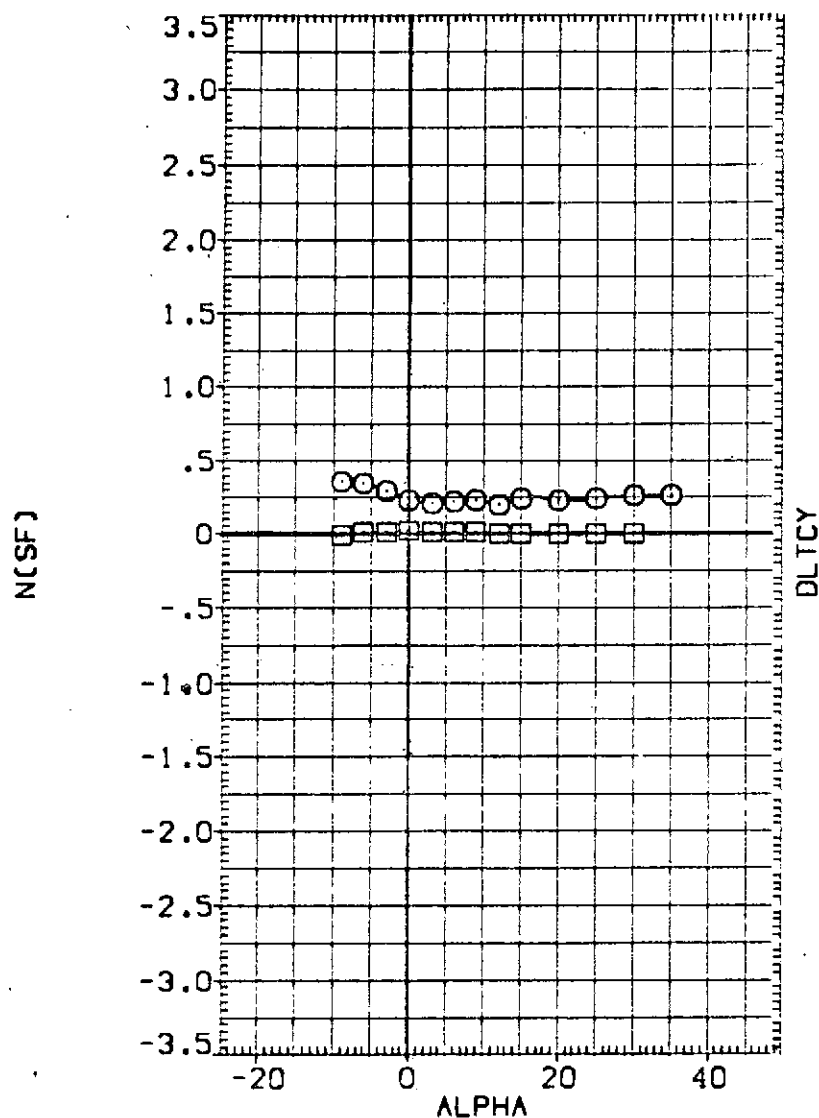


FIG. 08 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/OA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| [RHL02] | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | .000 | 68.000 | 47.000 | SREF | 2690.0000 SQ.FT. |
| [RHL000] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 [AIR] | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| [RHL002] | 0A82 CFHT113 MODEL 32-0 ORB V/N49N50 [AIR] | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRF | 1076.7000 IN. |
| | | | | | | YMRF | .0000 IN. |
| | | | | | | ZMRF | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

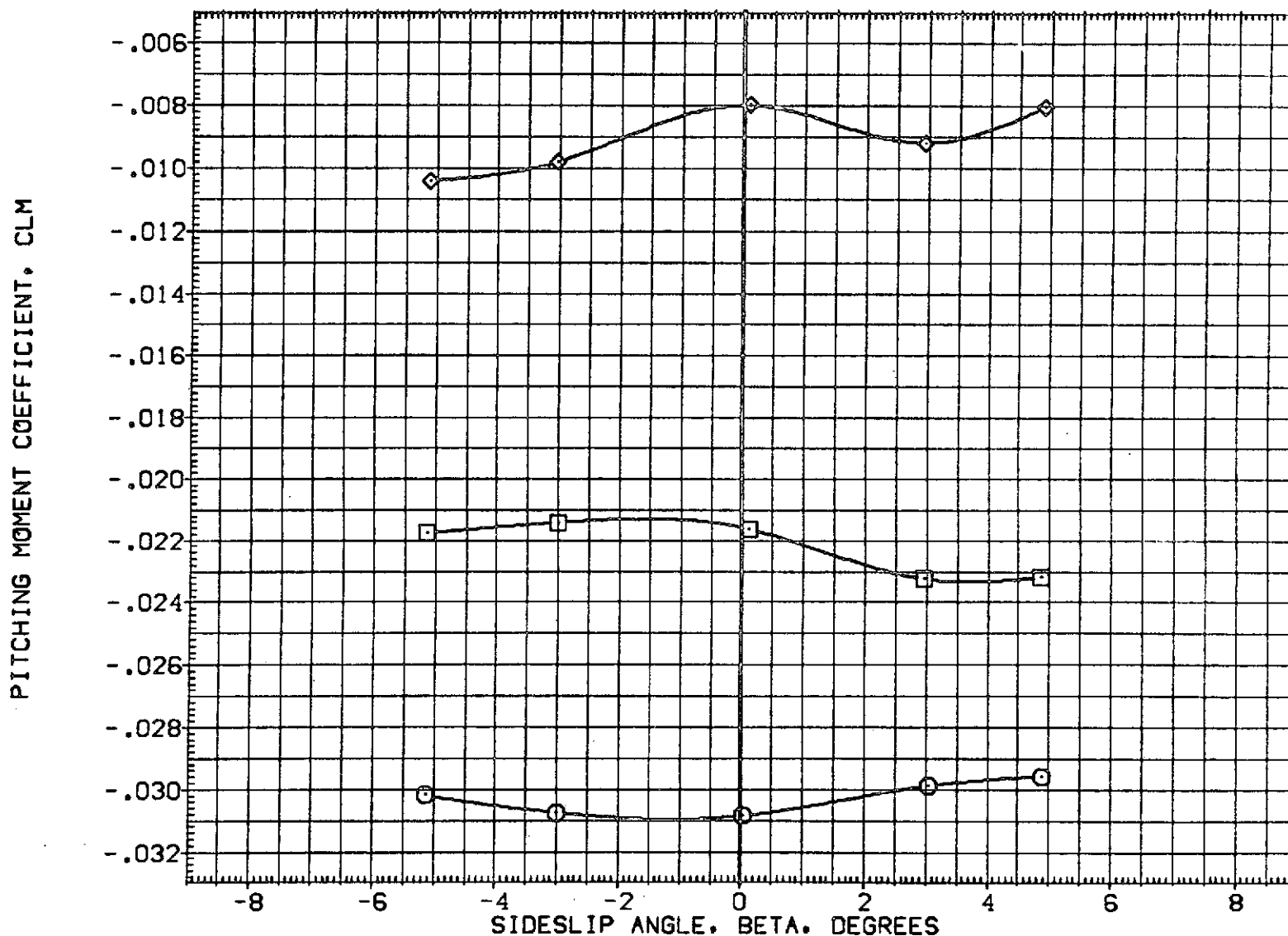


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF02) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2650.0000 SQ.FT. |
| (RHL000) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 [AIR] | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL002) | 0A82 CFHT113 MODEL 32-0 ORB V/N49N50 [AIR] | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

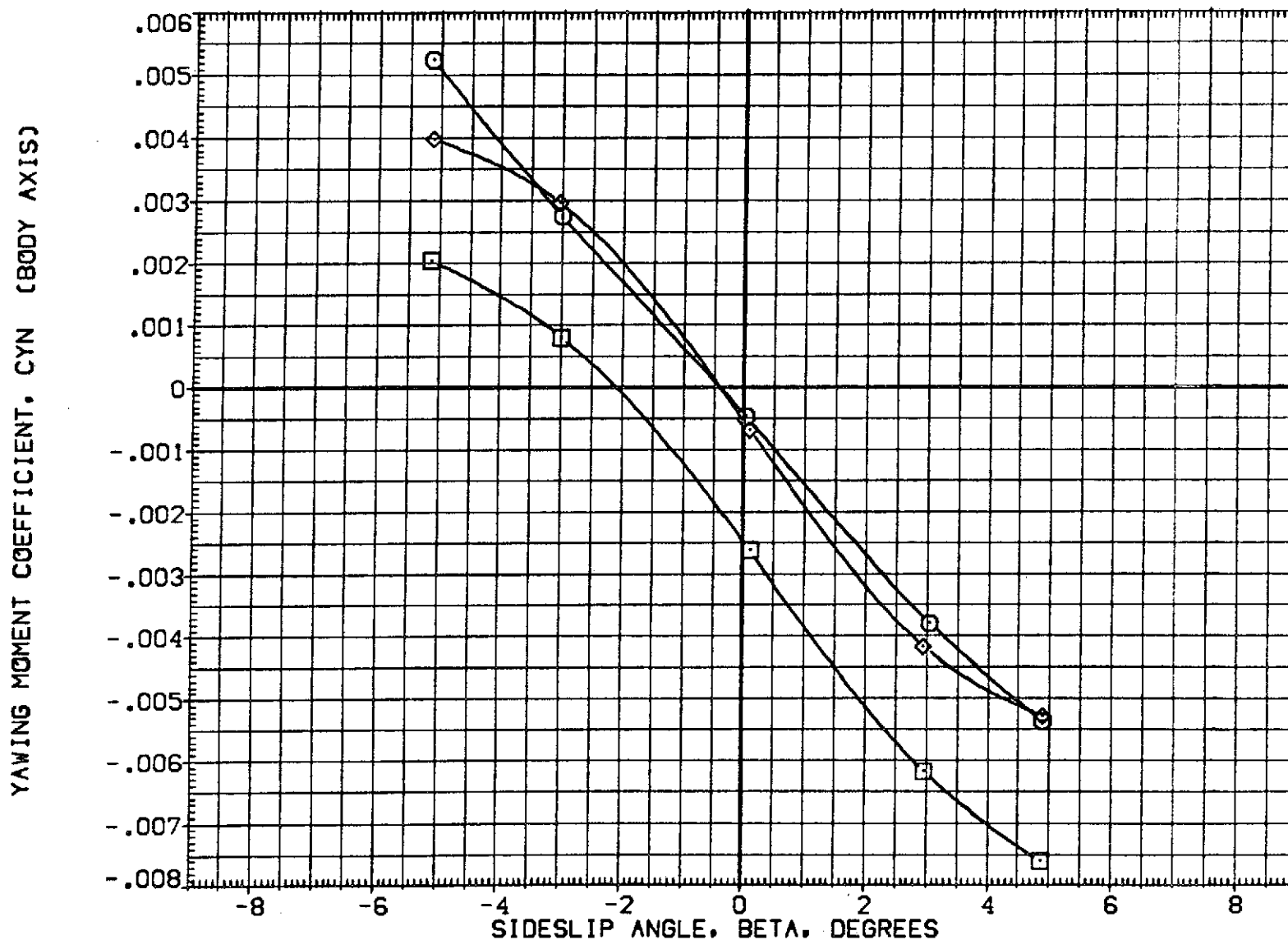


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF02) | QAB2 CFHT113 MODEL 32-0 DRB V/NB4 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL000) | QAB2 CFHT113 MODEL 32-0 DRB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL002) | QAB2 CFHT113 MODEL 32-0 DRB V/N49N50 (AIR) | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

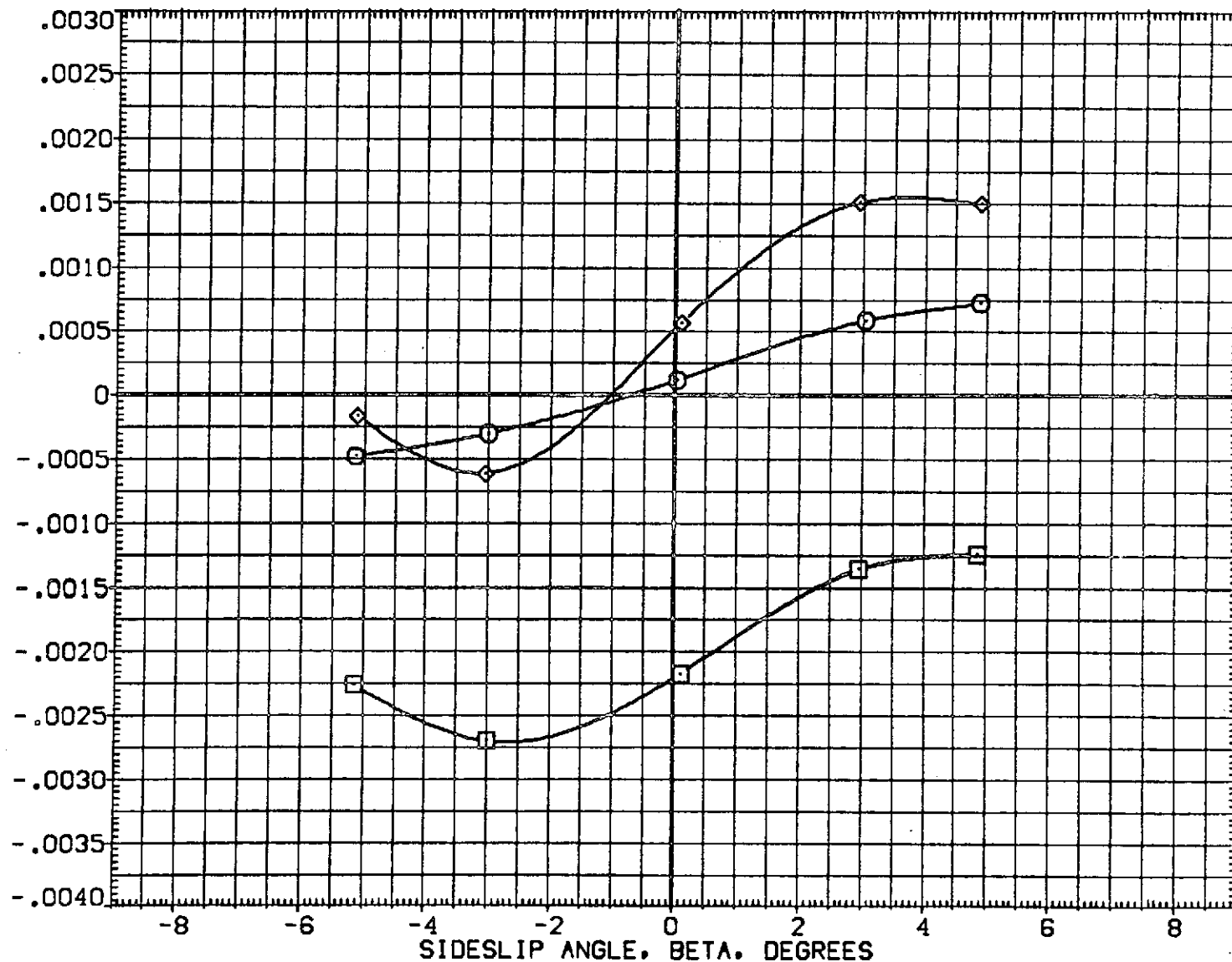


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | FORCS | TCRCS | T/OA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|---------|
| [RHLFO2] | QAB2 CFHT113 MODEL 32-0 GR8 V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2680.0000 | 50. FT. |
| [RHL000] | QAB2 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.0100 | IN. |
| [RHL002] | QAB2 CFHT113 MODEL 32-0 GR8 V/N49N50 (AIR) | 150.000 | 164.000 | 68.000 | 47.500 | SREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

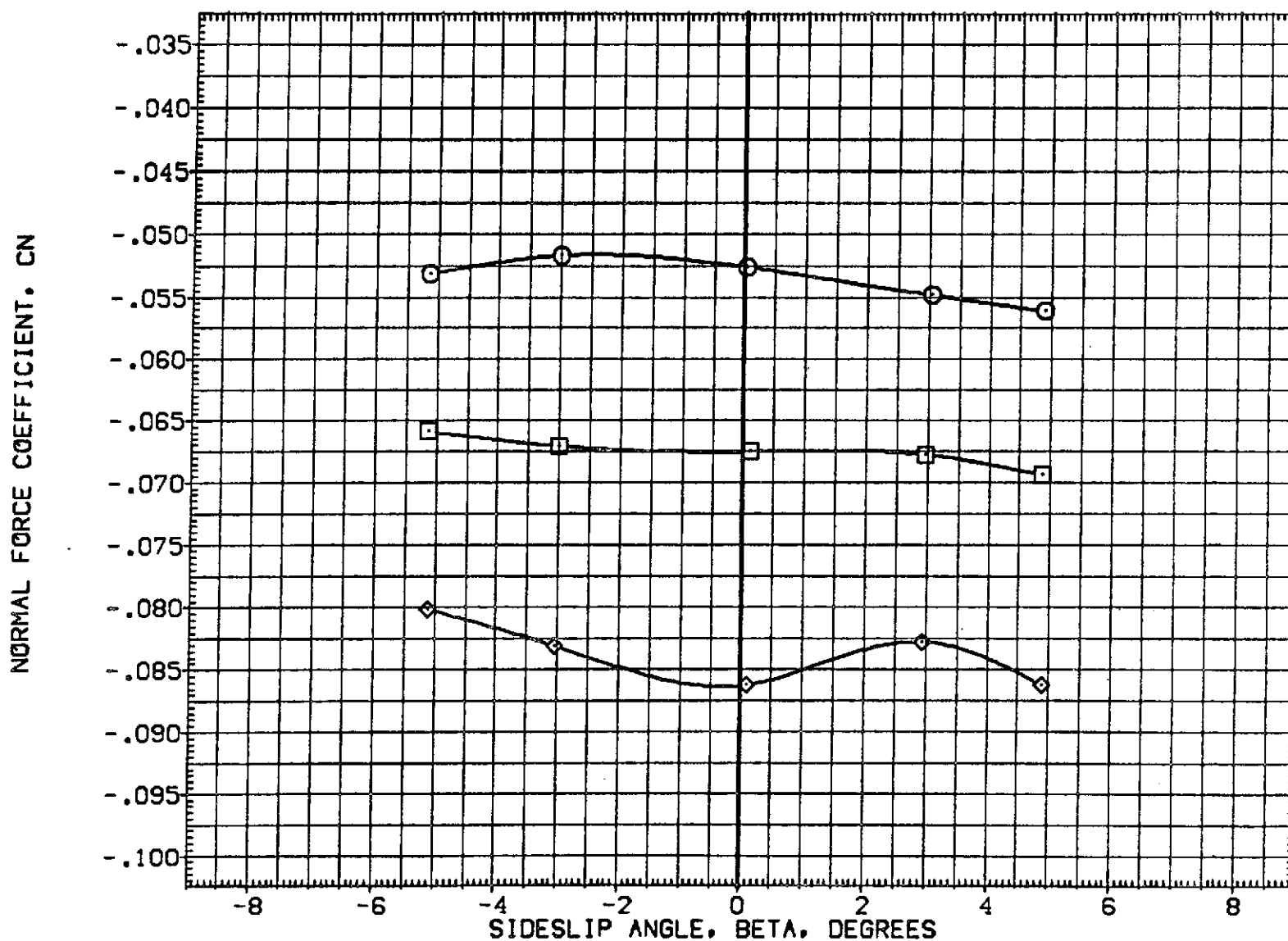


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|---------|
| (RHLF02) | 0A82 CFHT113 MODEL 32-0 ORB V/N94 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL000) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL002) | 0A82 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

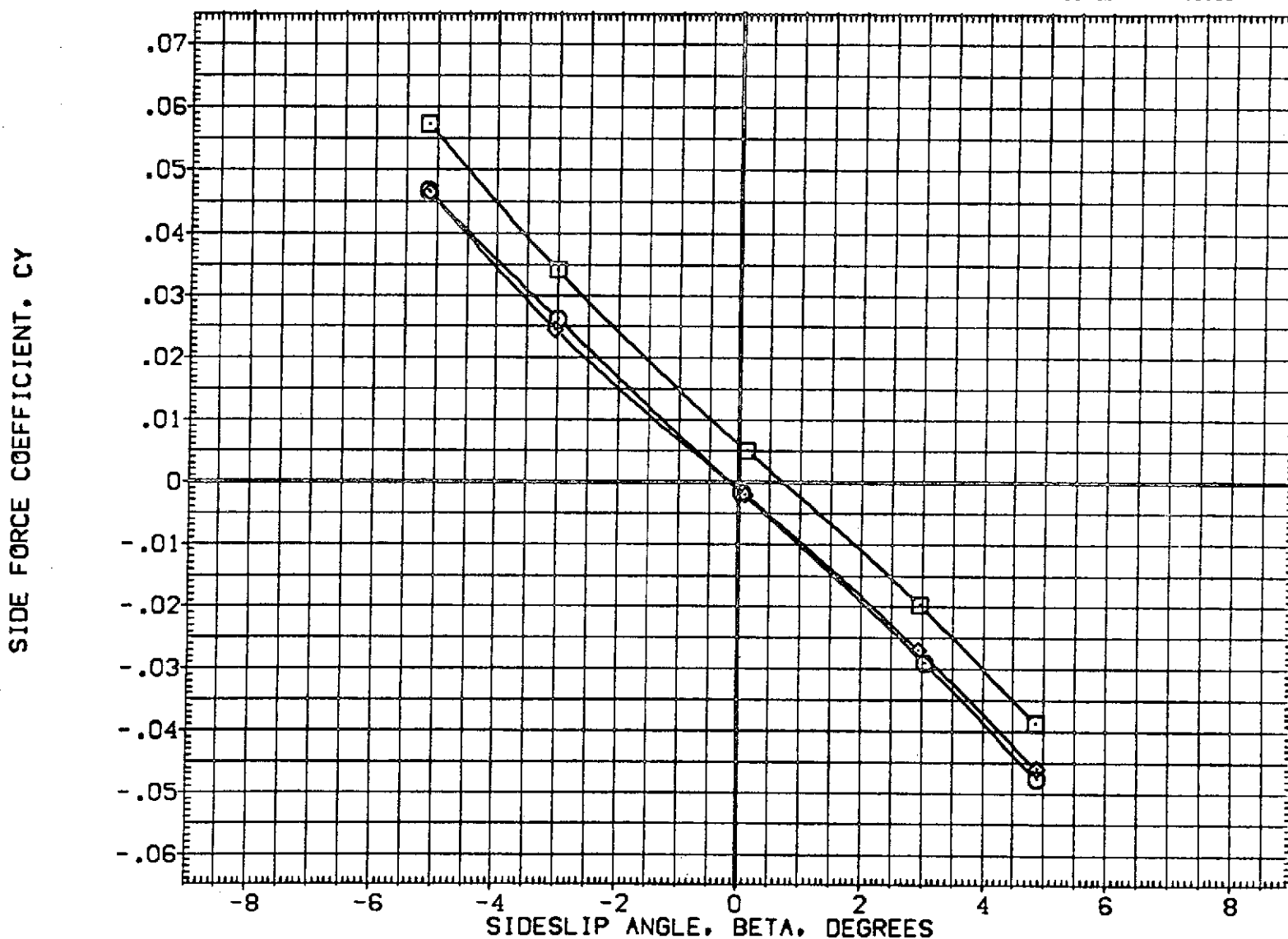


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| [RHLF02] | 0A82 CFHT113 MODEL 32-0 CR8 V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | GREF | 2690.0000 SQ.FT. |
| [RHL000] | 0A82 CFHT113 MODEL 32-0 CR8 V/N49 [AIR] | 150.000 | 155.000 | 29.000 | 47.500 | LREF | 474.0100 IN. |
| [RHL002] | 0A82 CFHT113 MODEL 32-0 CR8 V/N49N50 [AIR] | 150.000 | 164.000 | 68.000 | 47.500 | BREF | 926.6900 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

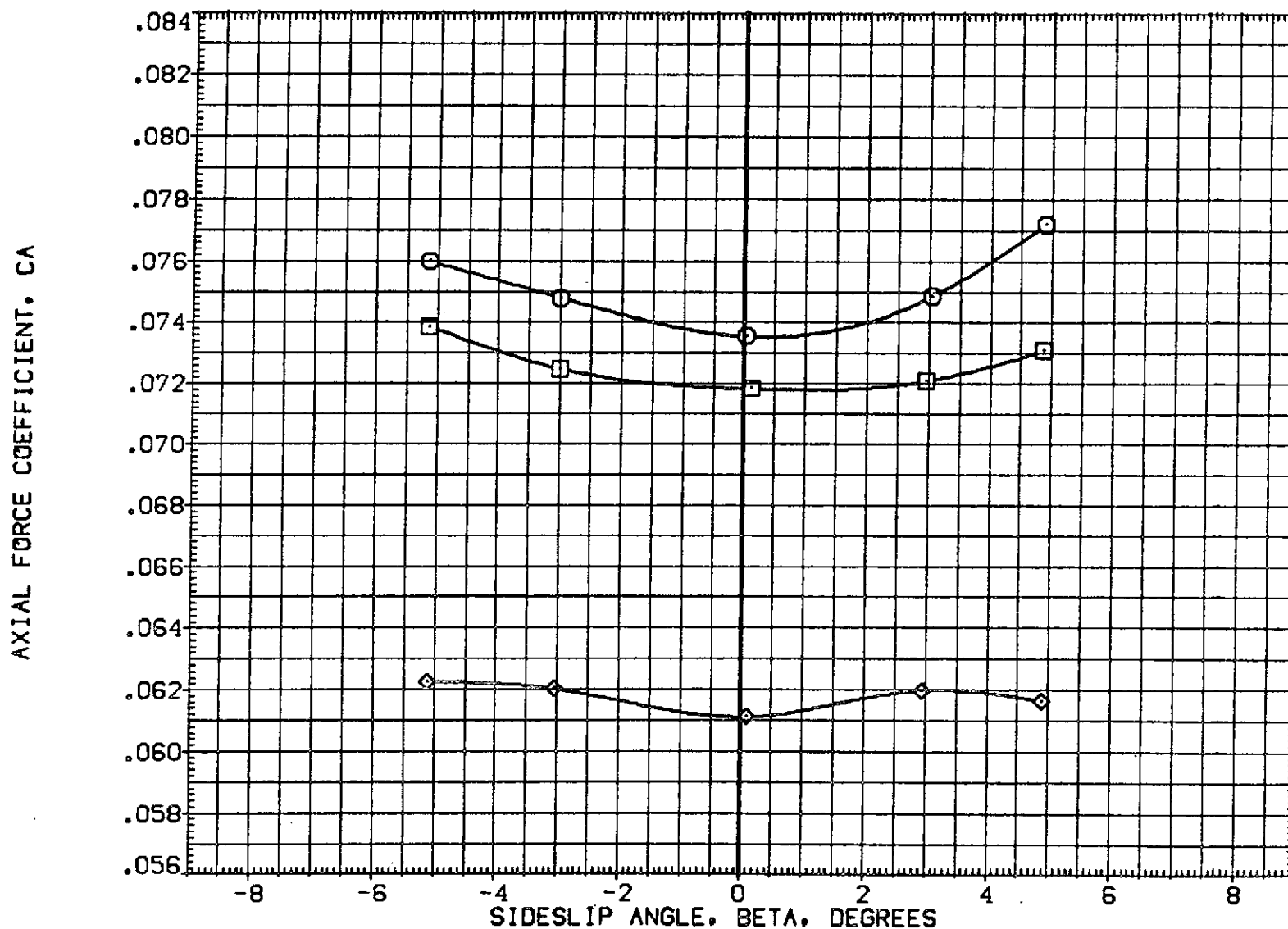


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| {CHLC00} ○ | 0A82 CFHT113 MODEL 32-0 DRB V/N49 (AIR) |
| {CHLC02} □ | 0A82 CFHT113 MODEL 32-0 DRB V/N49N50 (AIR) |

| D(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

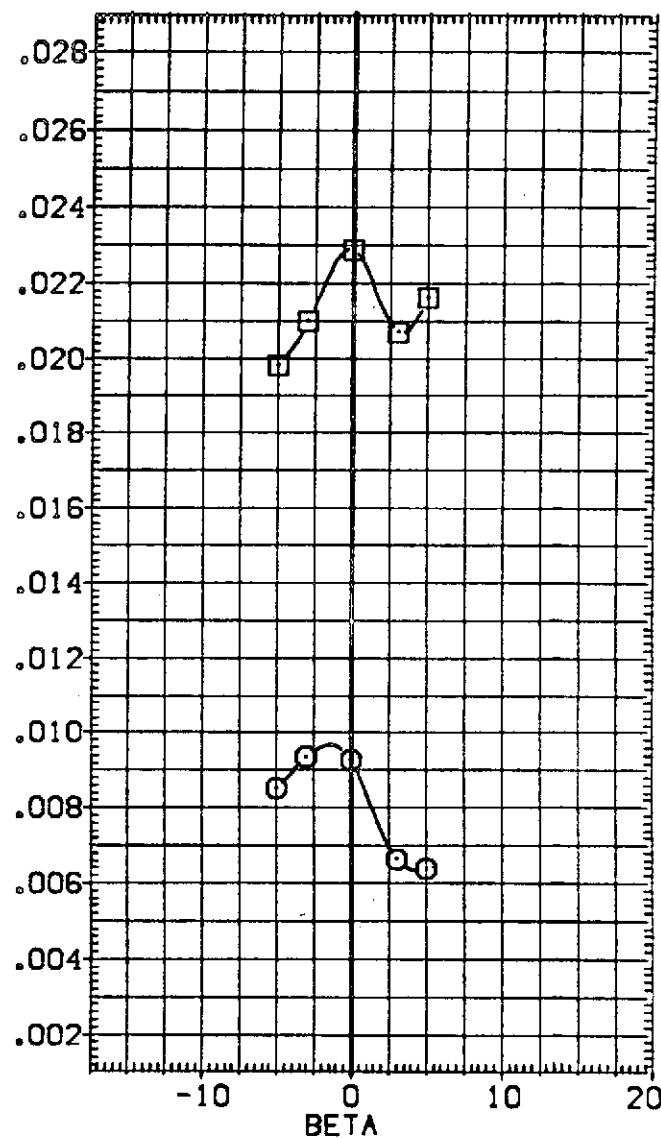
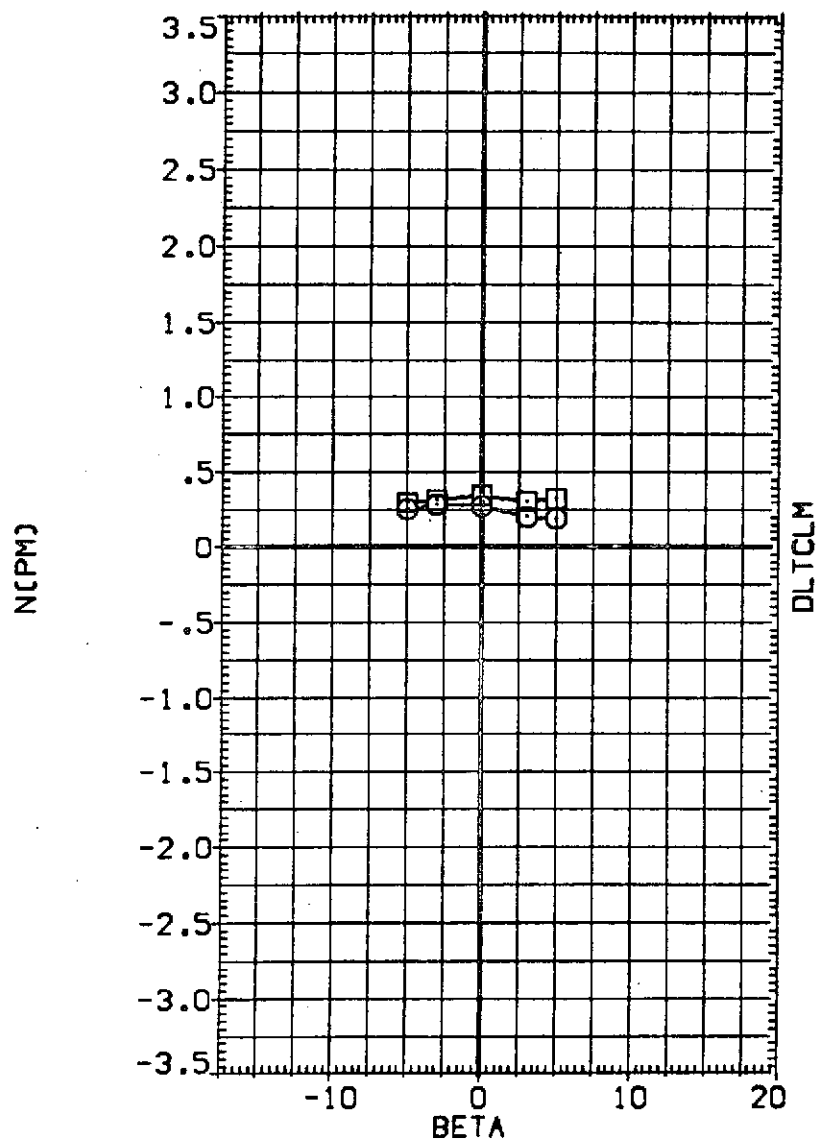




FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP
(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 {CHLC00}  0A82 CFHT113 MODEL 32-0 CR8 V/N49 (AIR)
 {CHLC02}  0A82 CFHT113 MODEL 32-0 CR8 V/N49N50 (AIR)

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|---------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

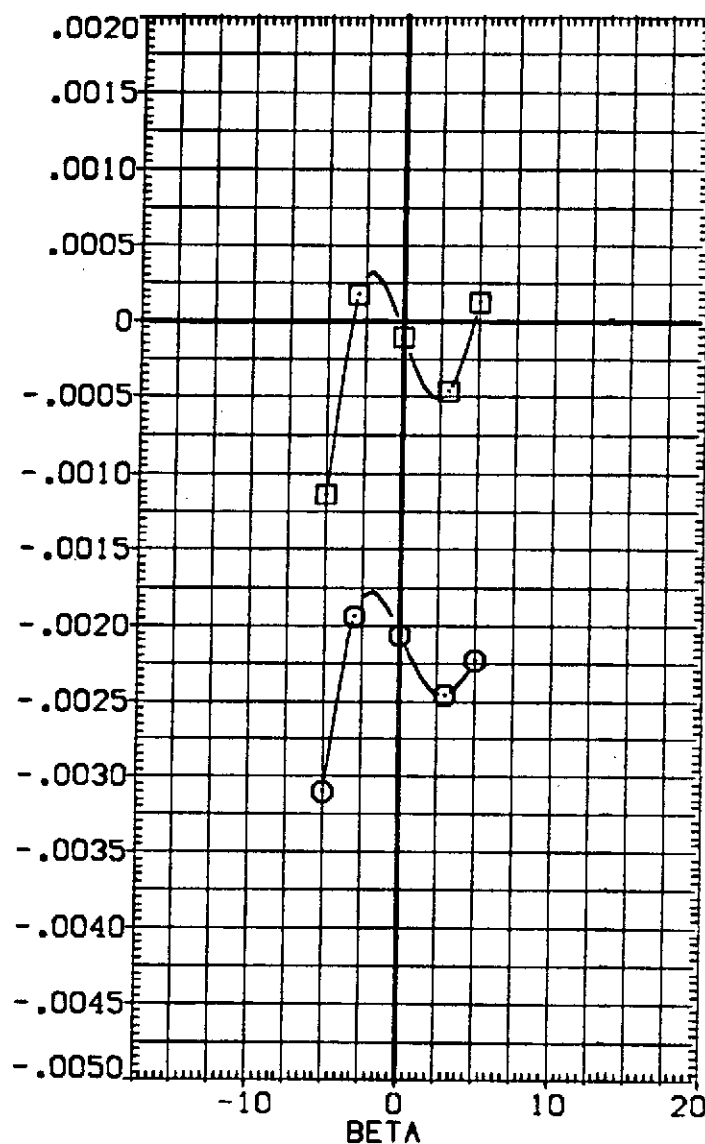
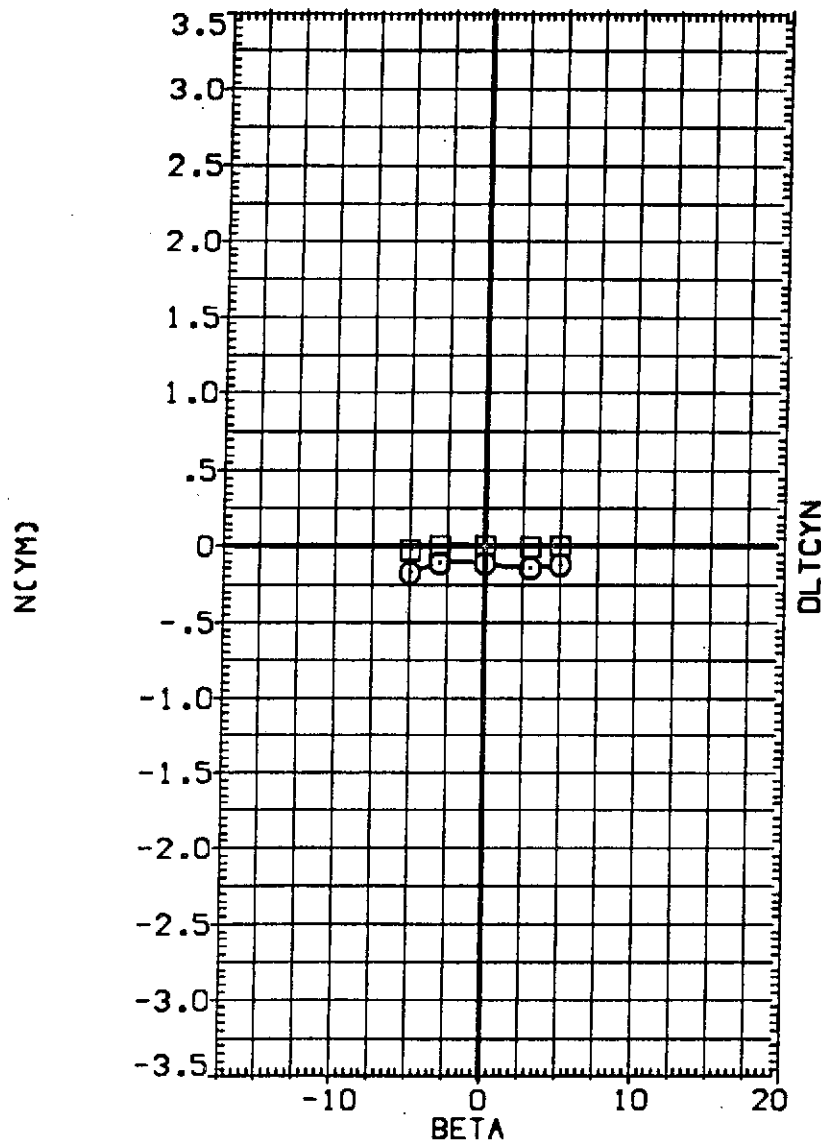




FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP
 (A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC00)  OA82 CFHT113 MODEL 32-0 OR8 V/N49 (AIR)
 (CHLC02)  OA82 CFHT113 MODEL 32-0 OR8 V/N49N50 (AIR)

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

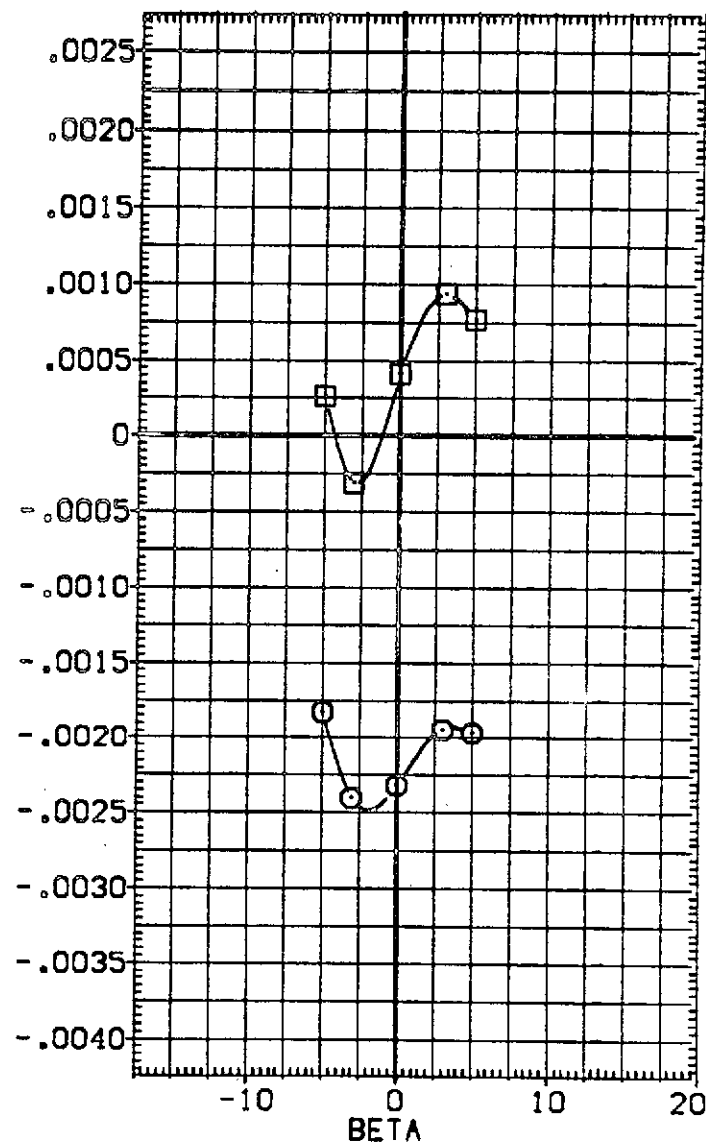
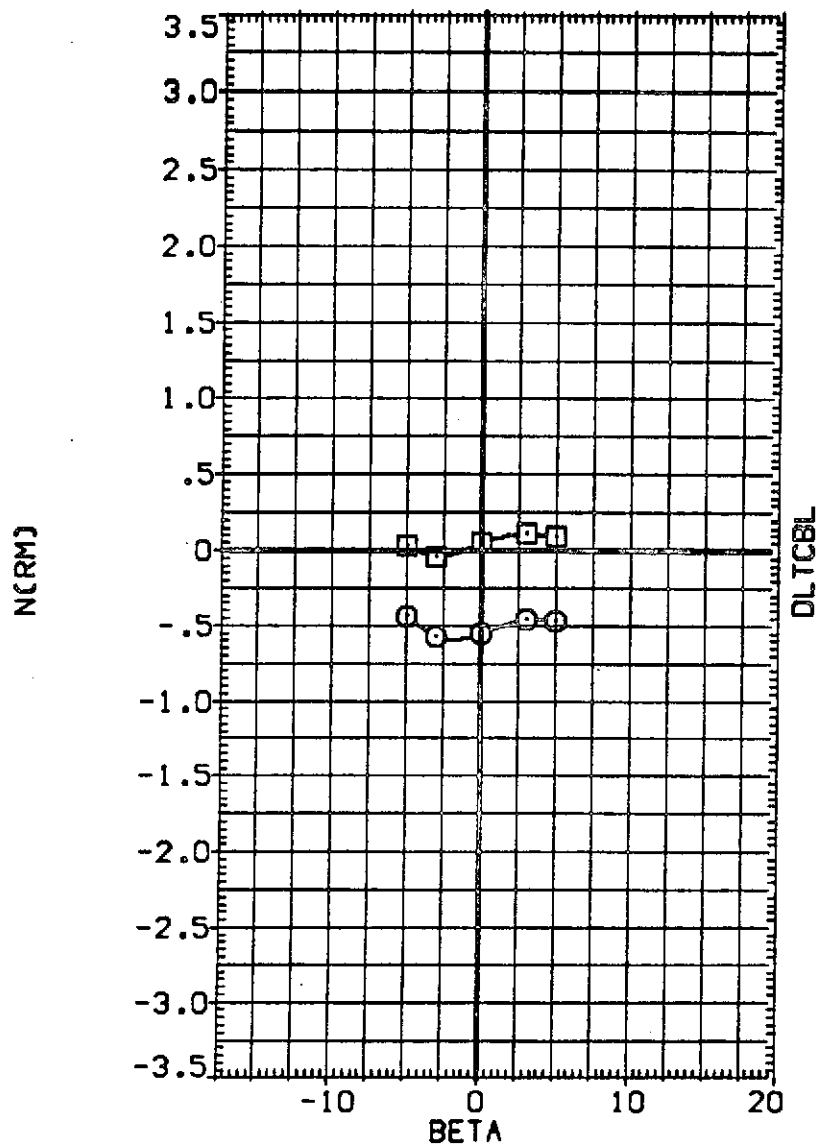


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP
 (A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|--------------------|--|
| (CHLC00) \square | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC02) \square | 0A82 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/GA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 | 50.FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | BREF | 936.6800 | IN. |
| | | | | XM RP | 1076.7000 | IN. |
| | | | | YM RP | .0000 | IN. |
| | | | | ZM RP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

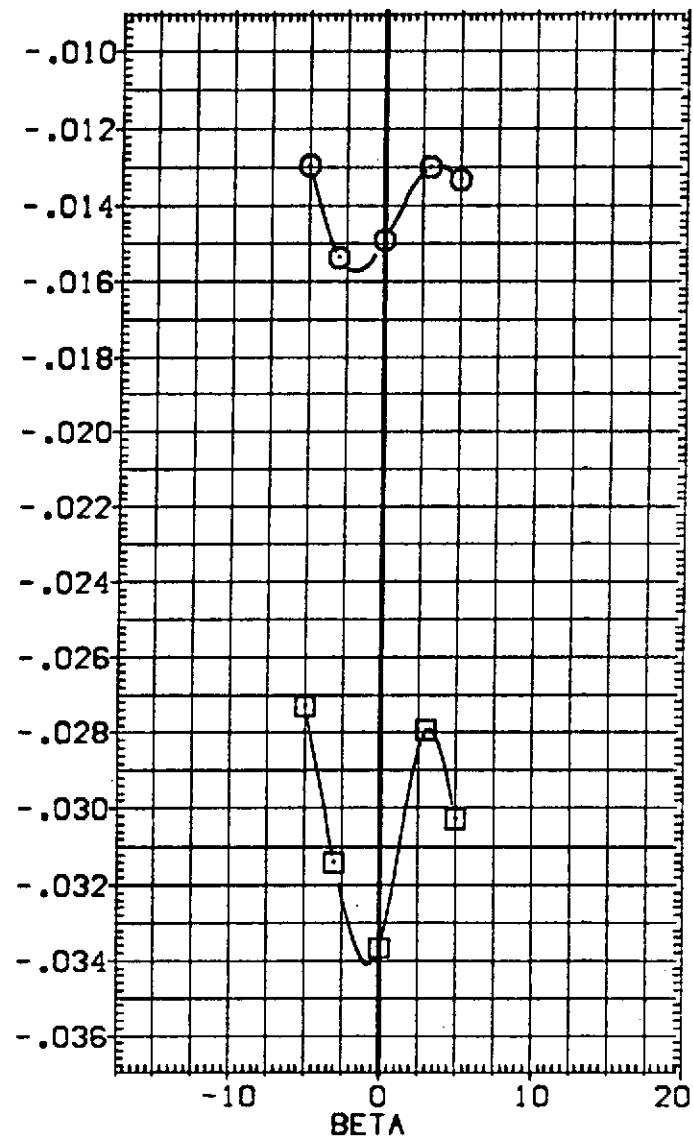
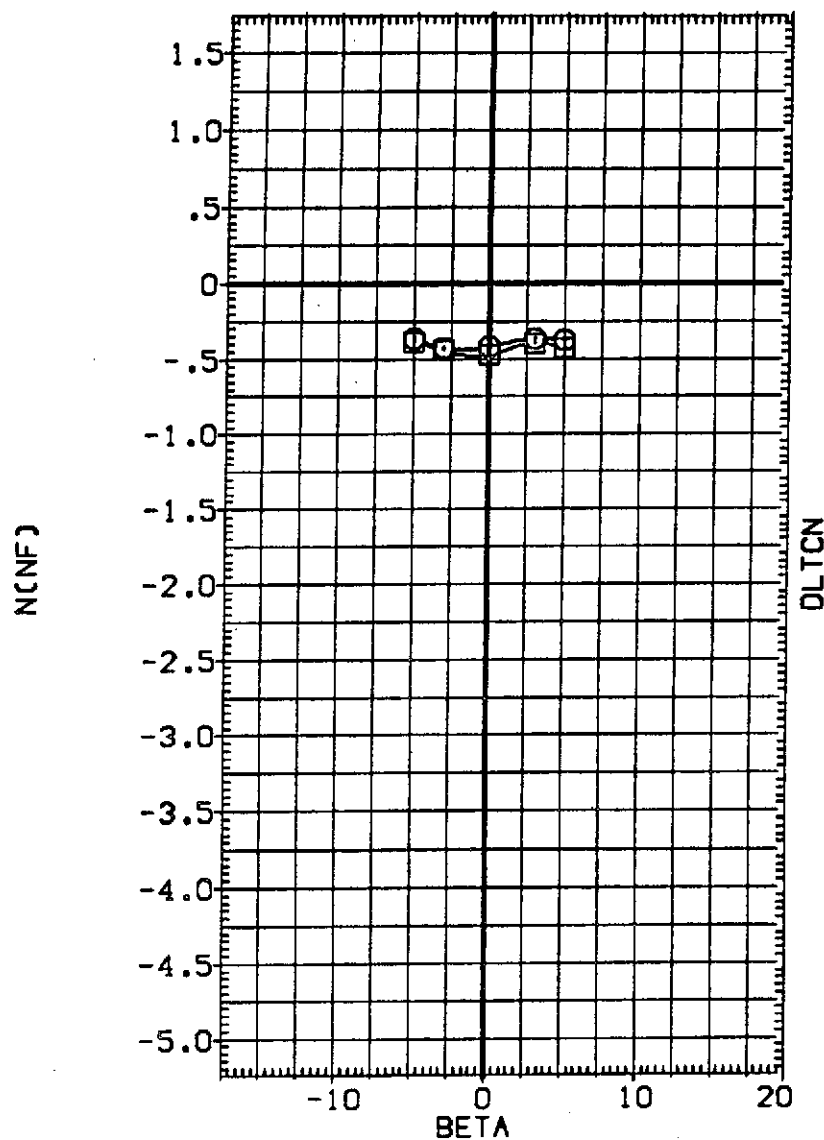


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| {CHLC00} ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| {CHLC02} □ | 0A82 CFHT113 MODEL 32-0 ORB V/N49N50 (AIR) |

| Q(P/SF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 164.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

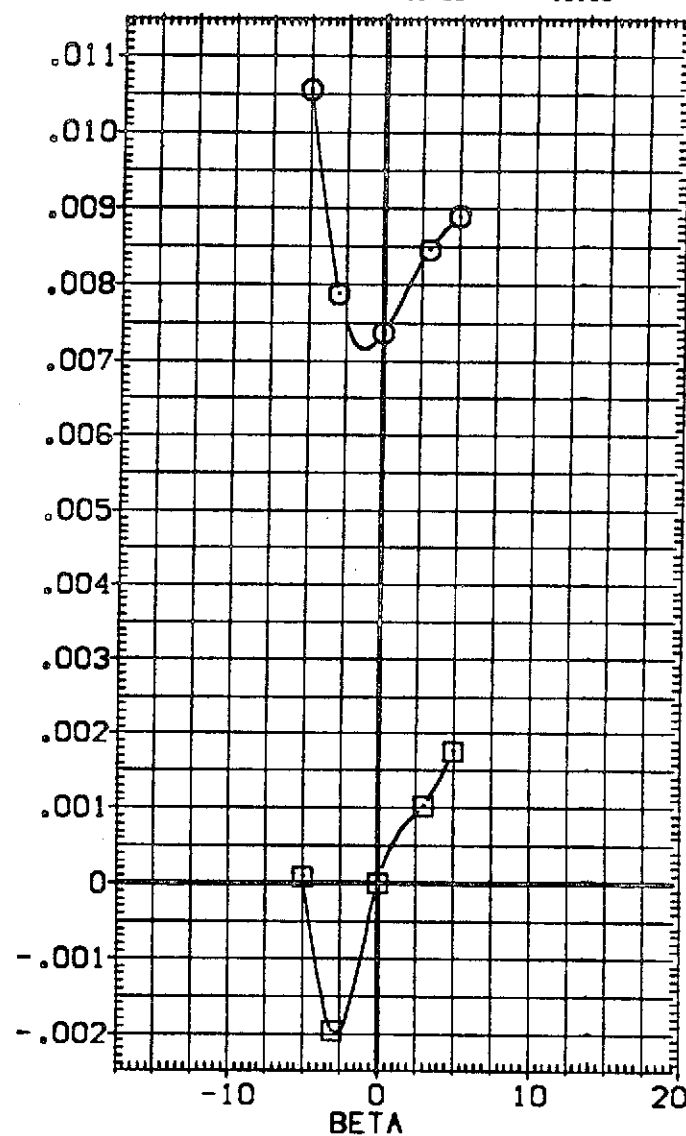
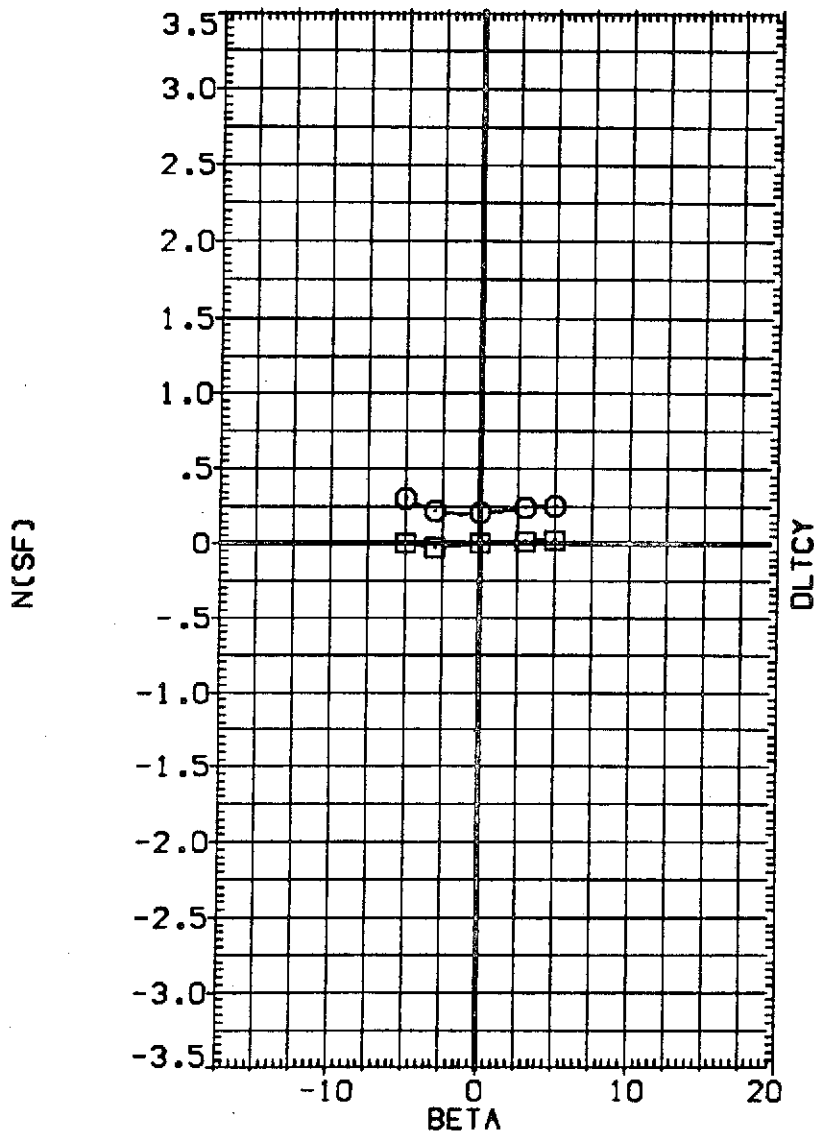


FIG. 09 EFFECT OF N49 AND N49N50 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 ORB W/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 ORB W/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL007) | 0A82 CFHT113 MODEL 32-0 ORB W/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

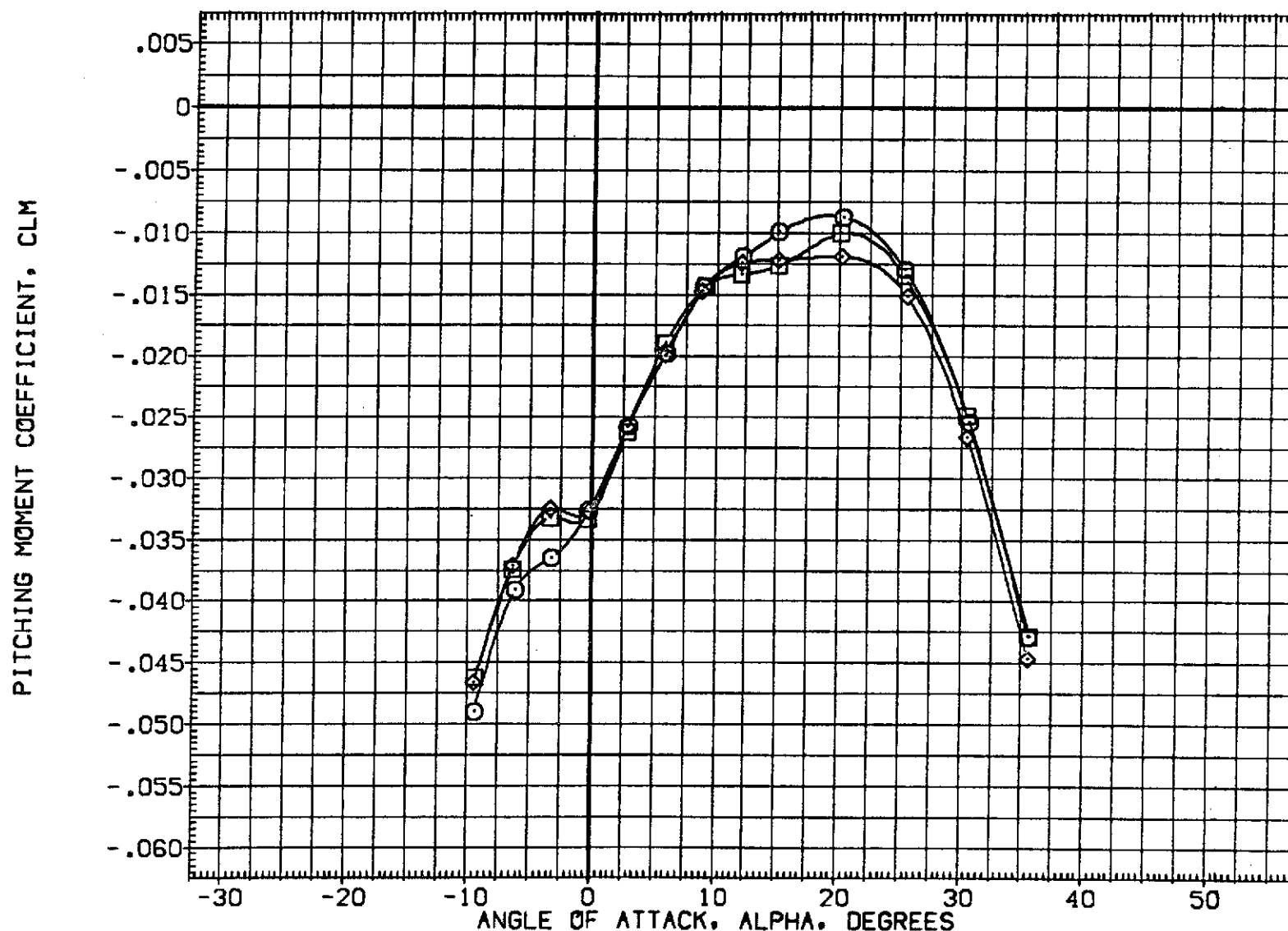


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|----------------|
| [RHL004] | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 RCS OFF | 150.000 | .000 | 70.000 | .000 | SREF | 2690.0000 SQ.F |
| [RHL009] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| [RHL007] | 0A82 CFHT113 MODEL 32-0 OR8 V/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

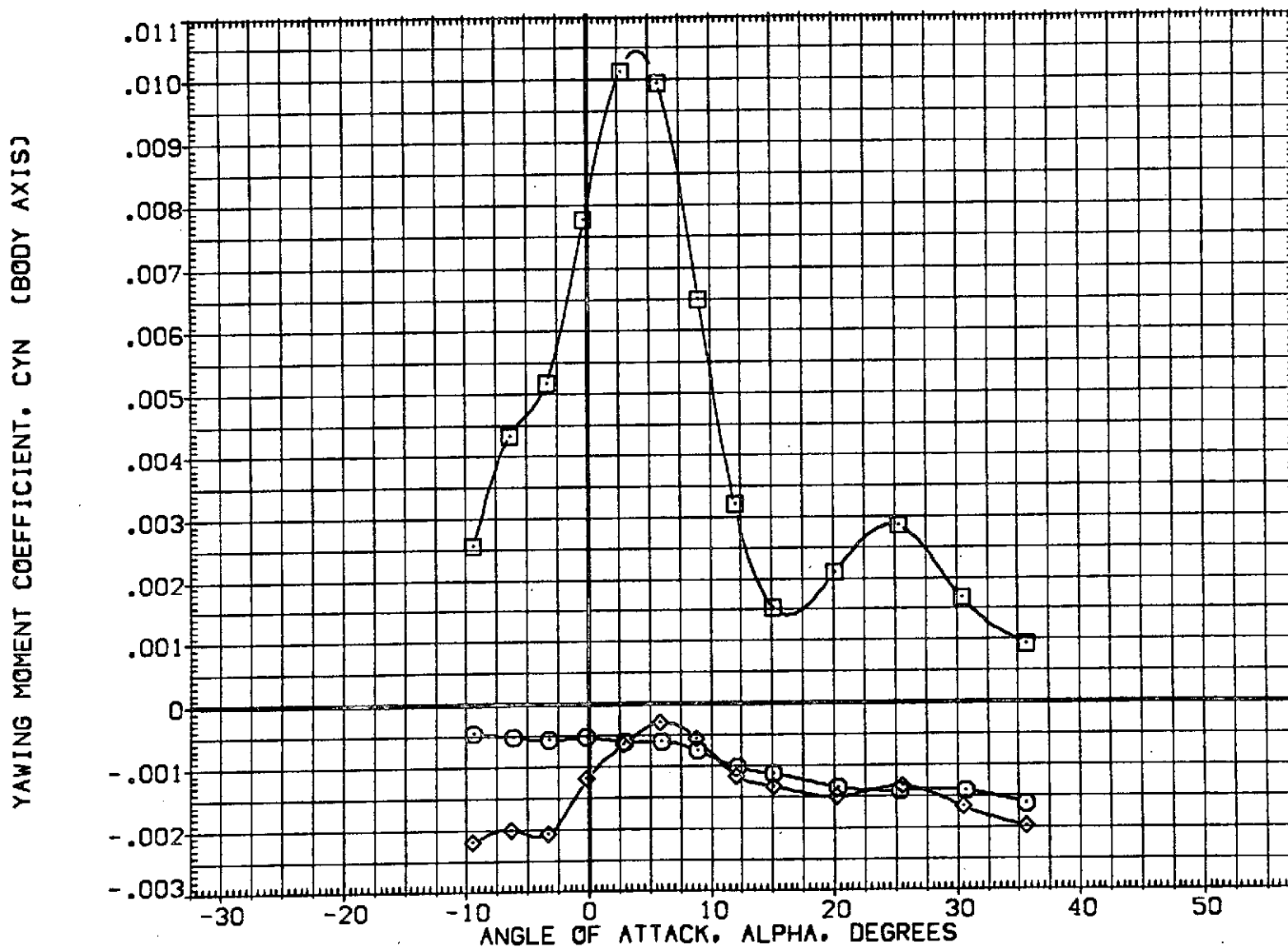


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 DR8 W/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 DR8 W/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL007) | 0A82 CFHT113 MODEL 32-0 DR8 W/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |



FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 OR8 W/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 OR8 W/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL007) | QAB2 CFHT113 MODEL 32-0 OR8 W/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 938.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

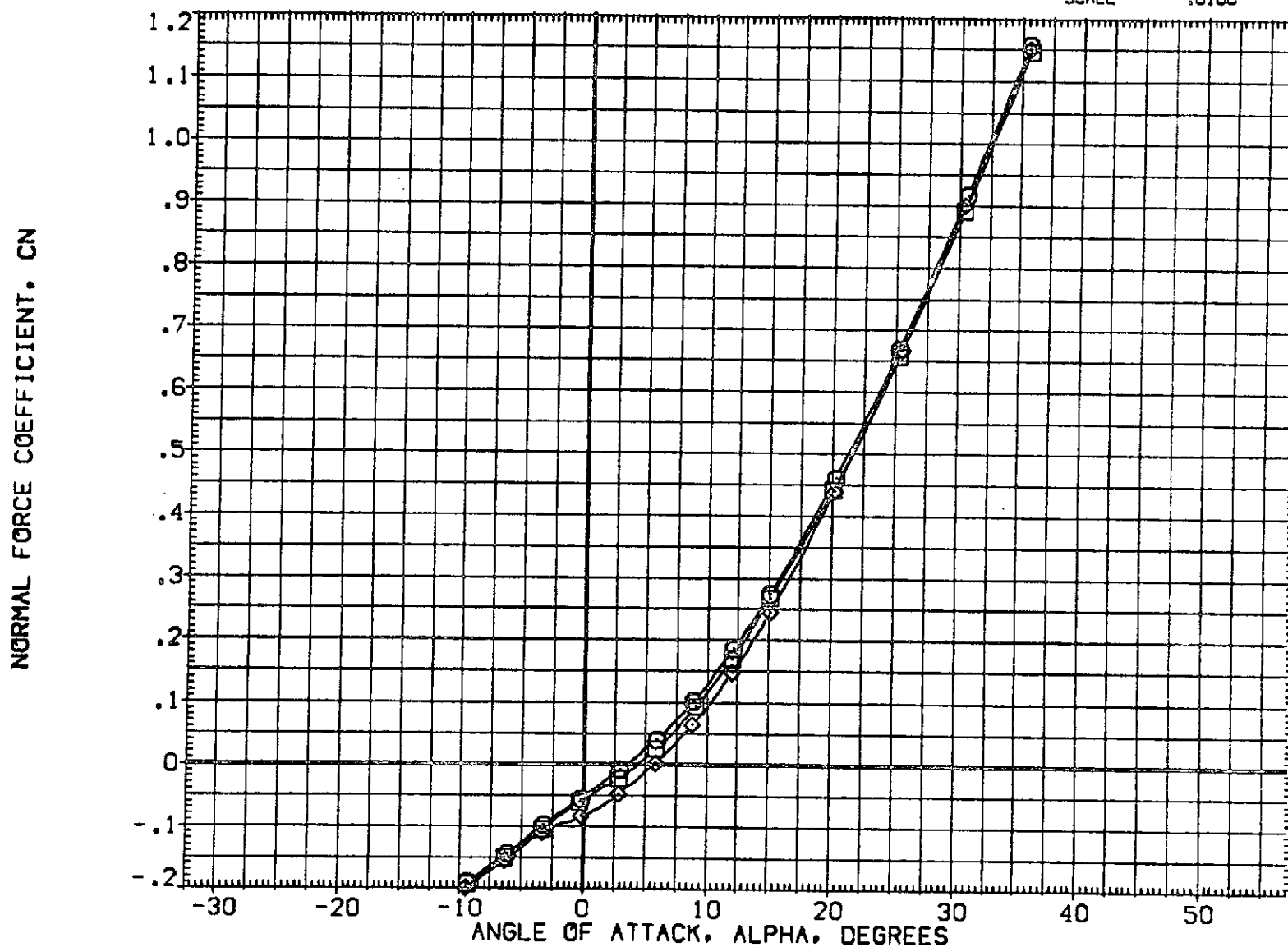


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH
 (A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| [RHLF04] | QAB2 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2650.0000 SQ.FT. |
| [RHL009] | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| [RHL007] | QAB2 CFHT113 MODEL 32-0 GRB V/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 935.6800 IN. |
| | | | | | | XMRF | 1076.7000 IN. |
| | | | | | | YMRF | .0000 IN. |
| | | | | | | ZMRF | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

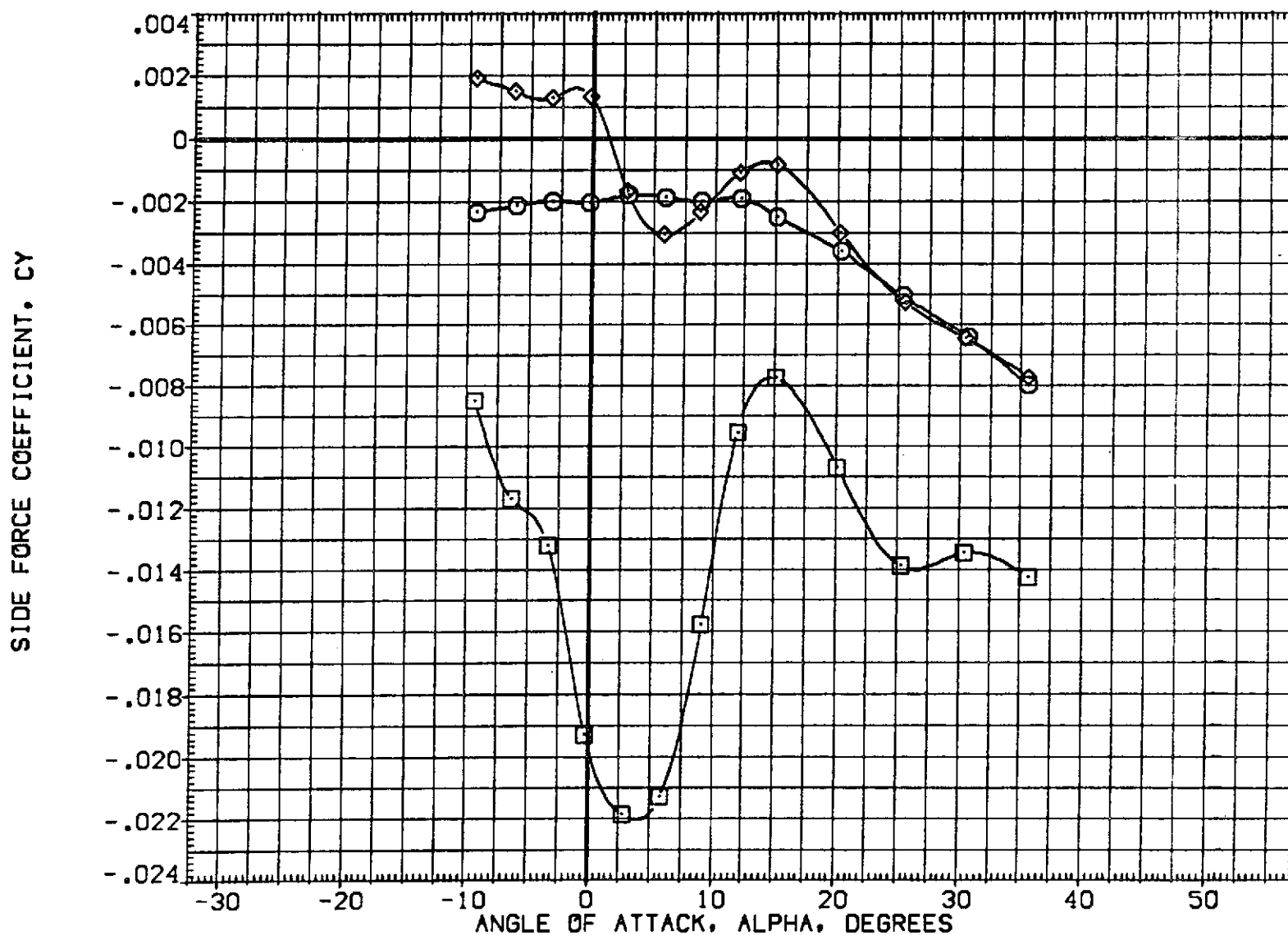


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL007) | QAB2 CFHT113 MODEL 32-0 ORB V/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

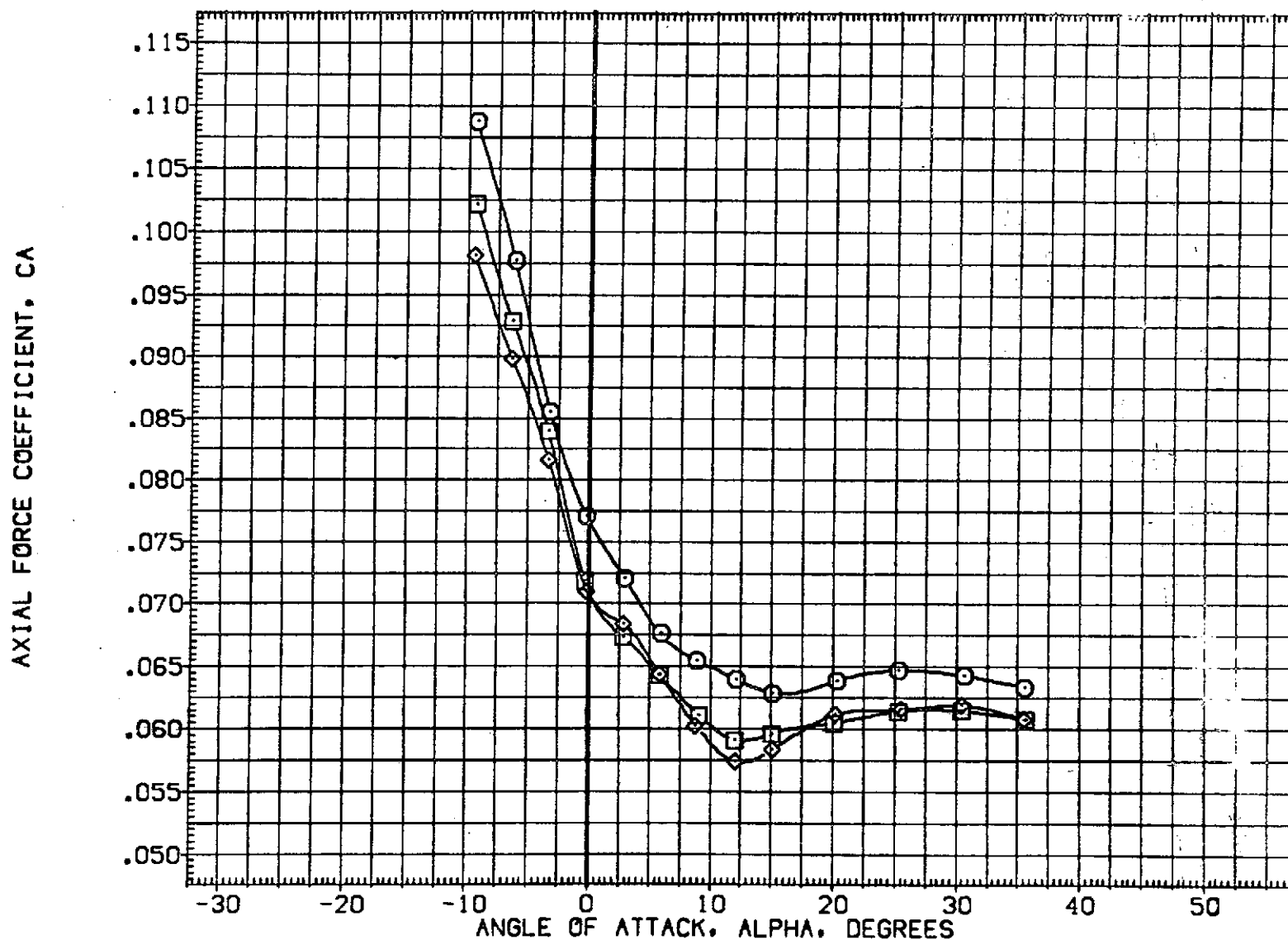


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC08) | 0A82 CFHT113 MODEL 32-0 ORB W/N52 (AIR) |
| (CHLC07) | 0A82 CFHT113 MODEL 32-0 ORB W/N81N52 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2650.0000 SQ.FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

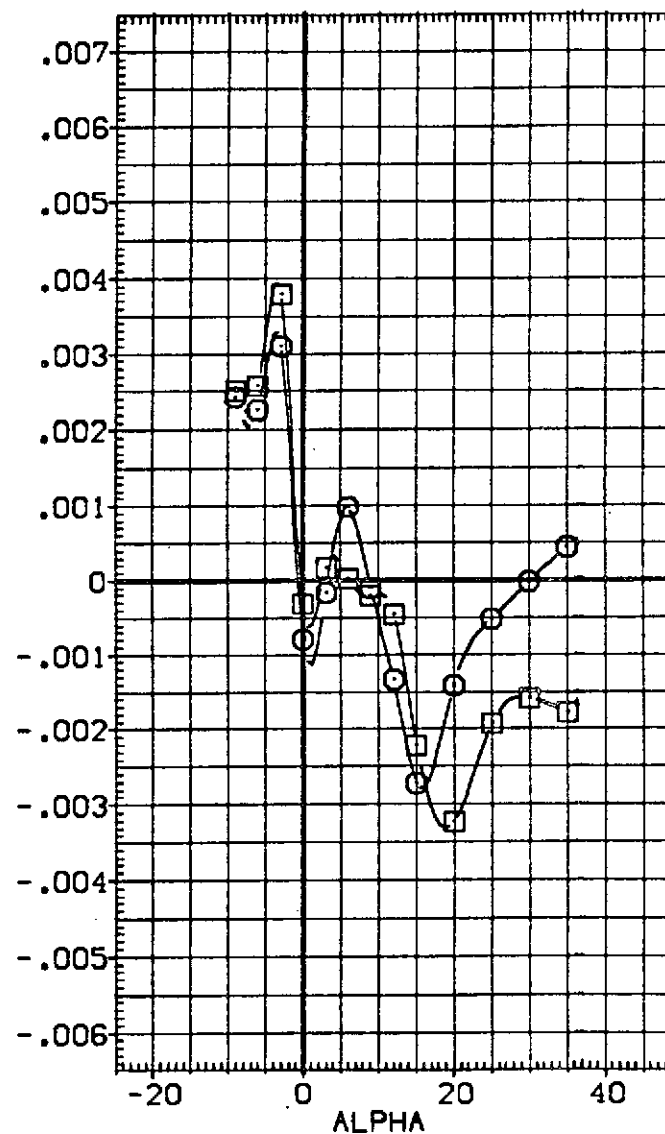
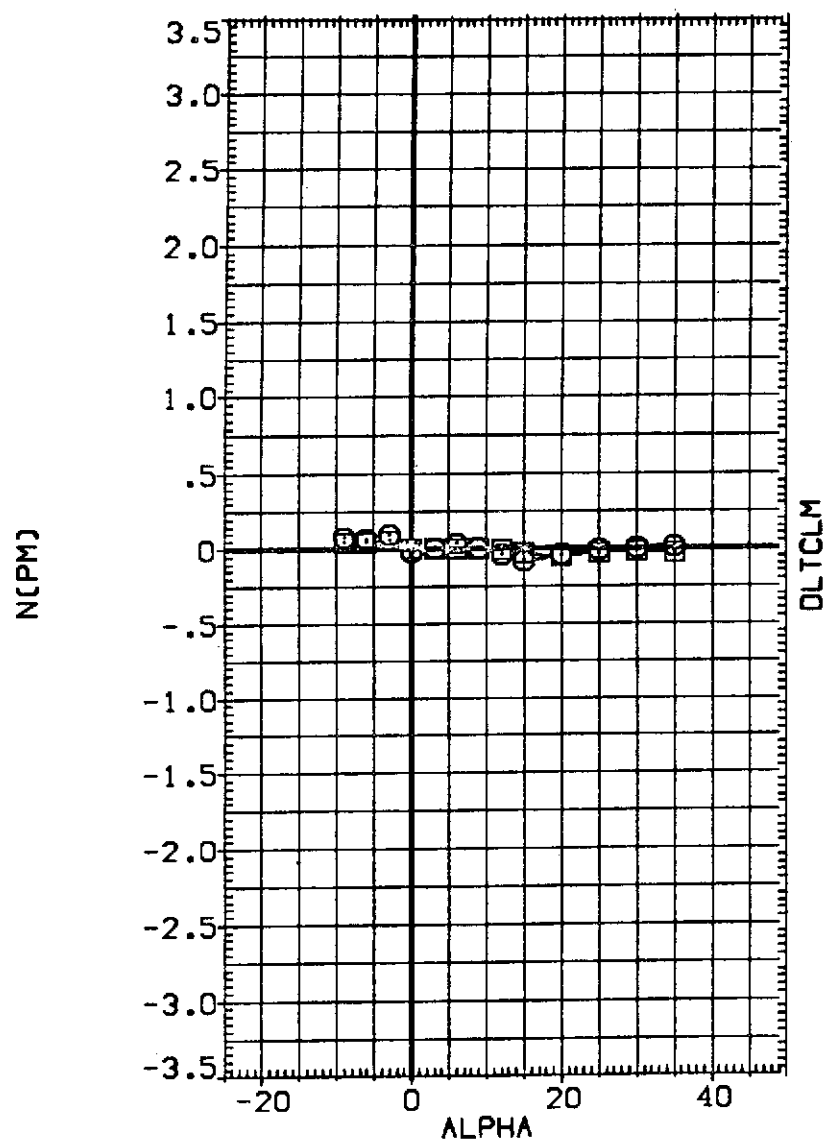


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC09) | ○ OA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| (CHLC07) | □ OA82 CFHT113 MODEL 32-0 ORB V/N81NS2 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

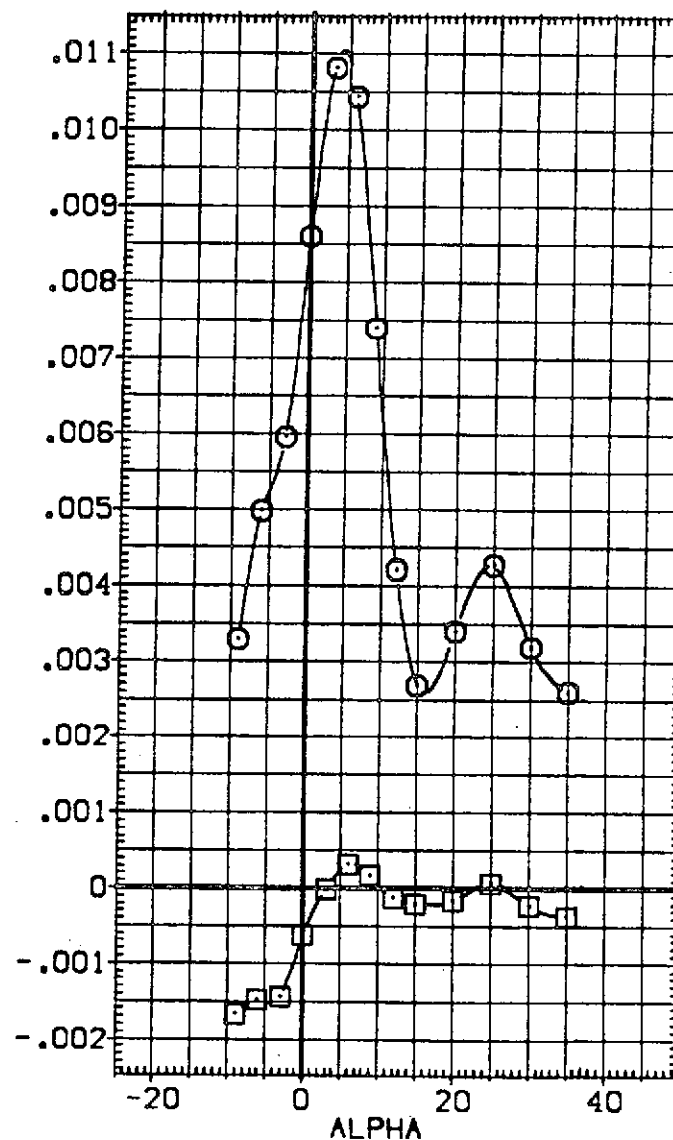
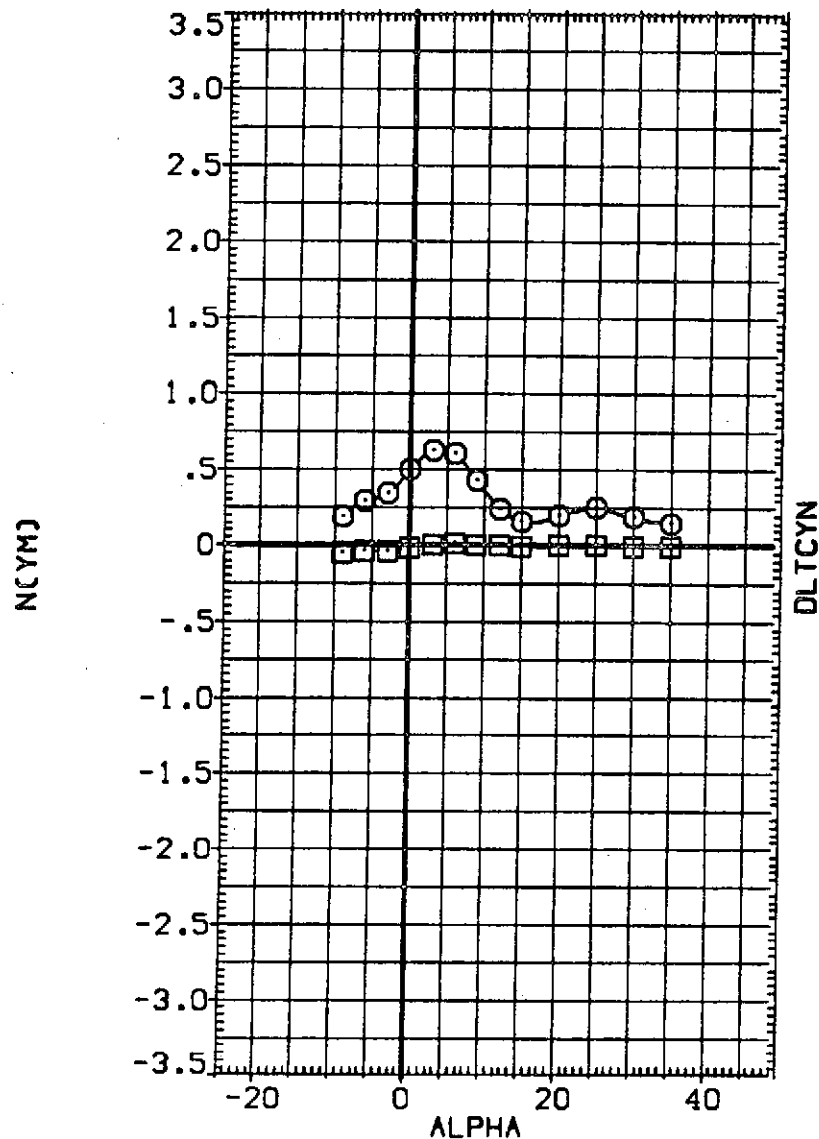




FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|---|--|
| [CHLC09]  | 0A82 CFHT113 MODEL 32-0 DRB V/N52 [AIR] |
| [CHLC07]  | 0A82 CFHT113 MODEL 32-0 DRB V/N81N52 [AIR] |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

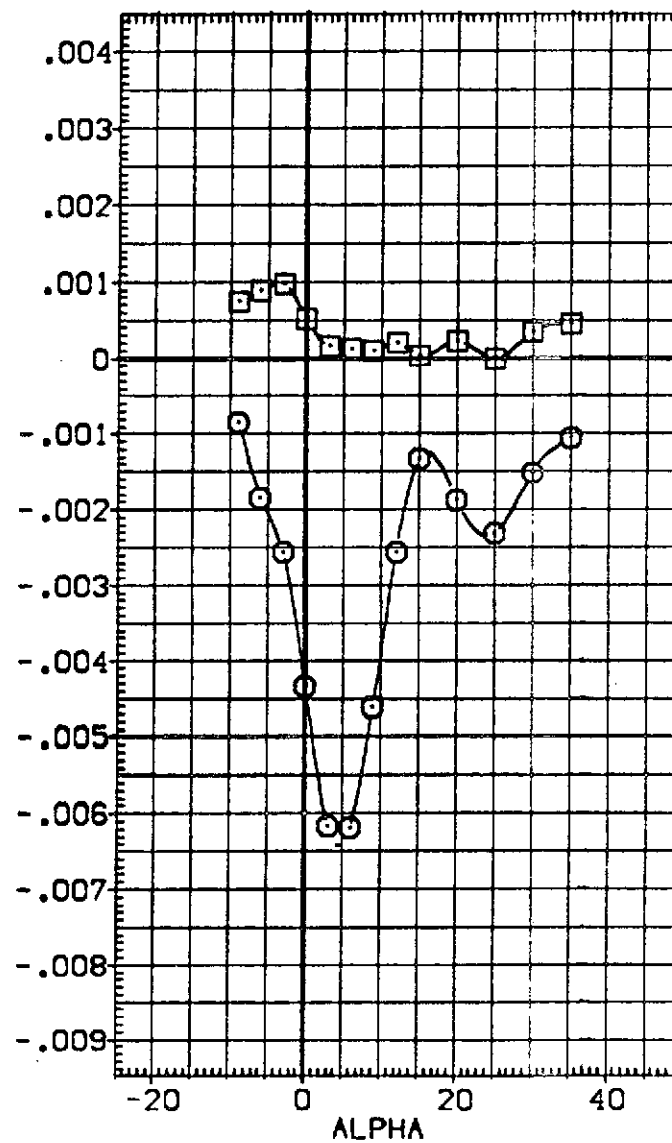
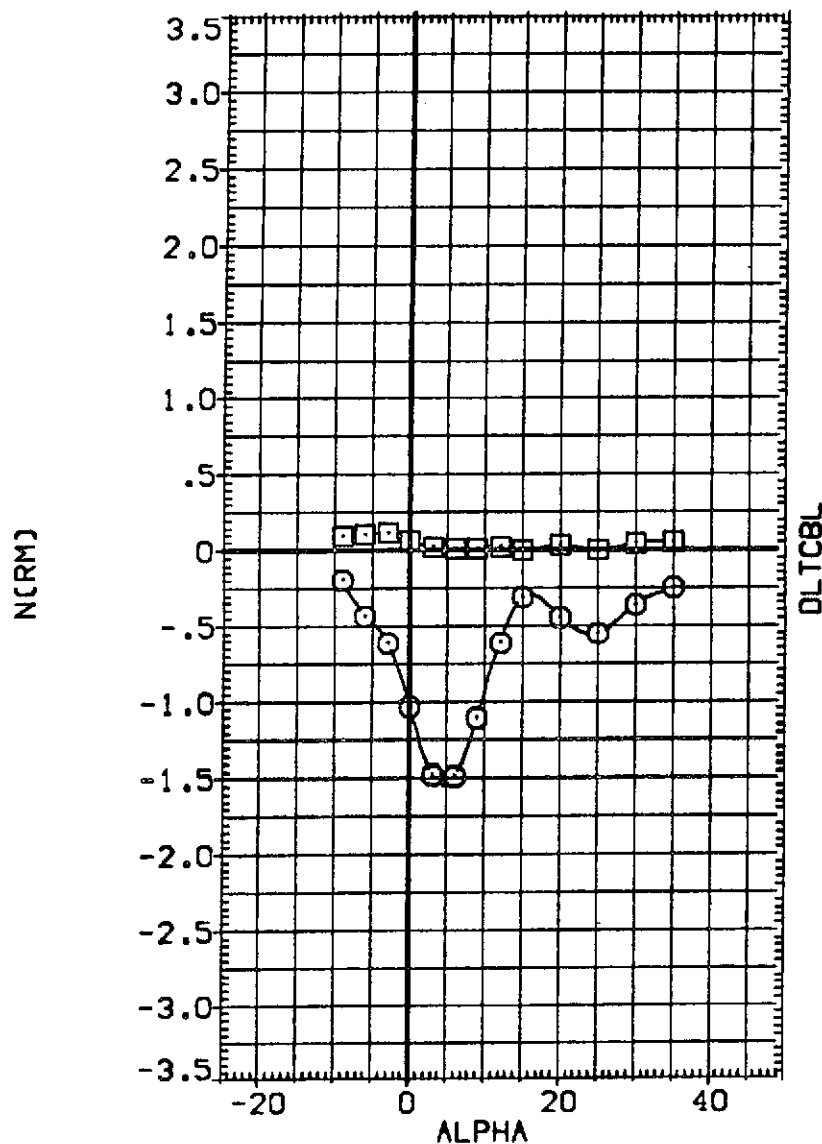


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC09) | QAB2 CFHT113 MODEL 32-0 ORB W/N52 (AIR) |
| (CHLC07) | QAB2 CFHT113 MODEL 32-0 ORB W/N81N52 (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SO.FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

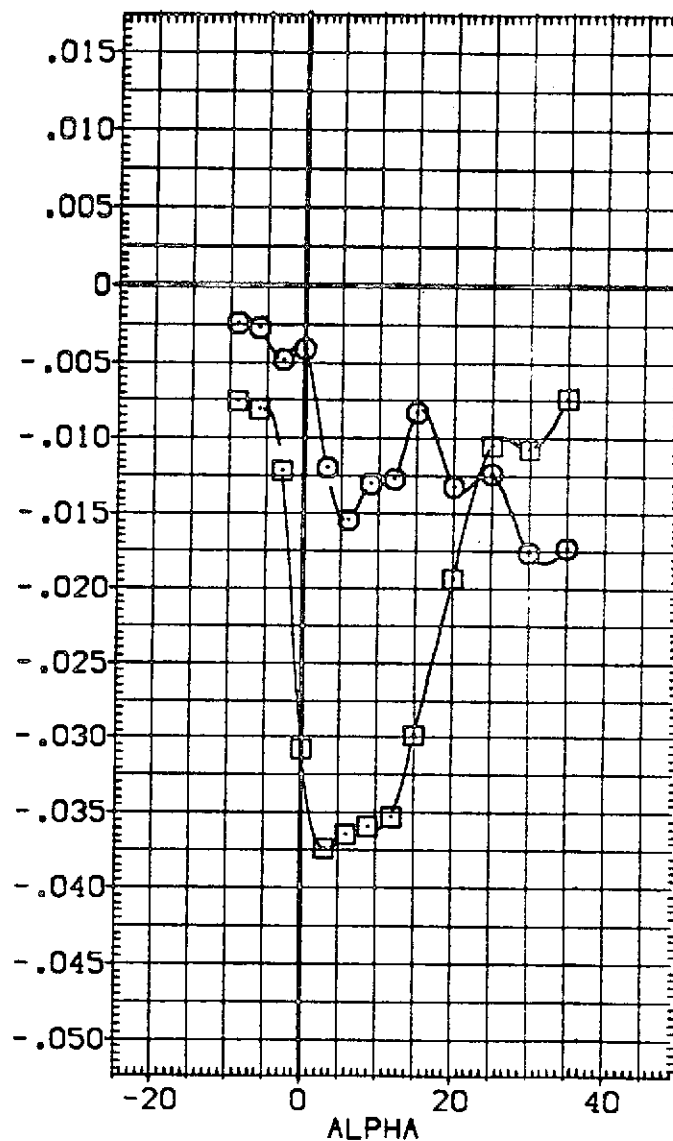
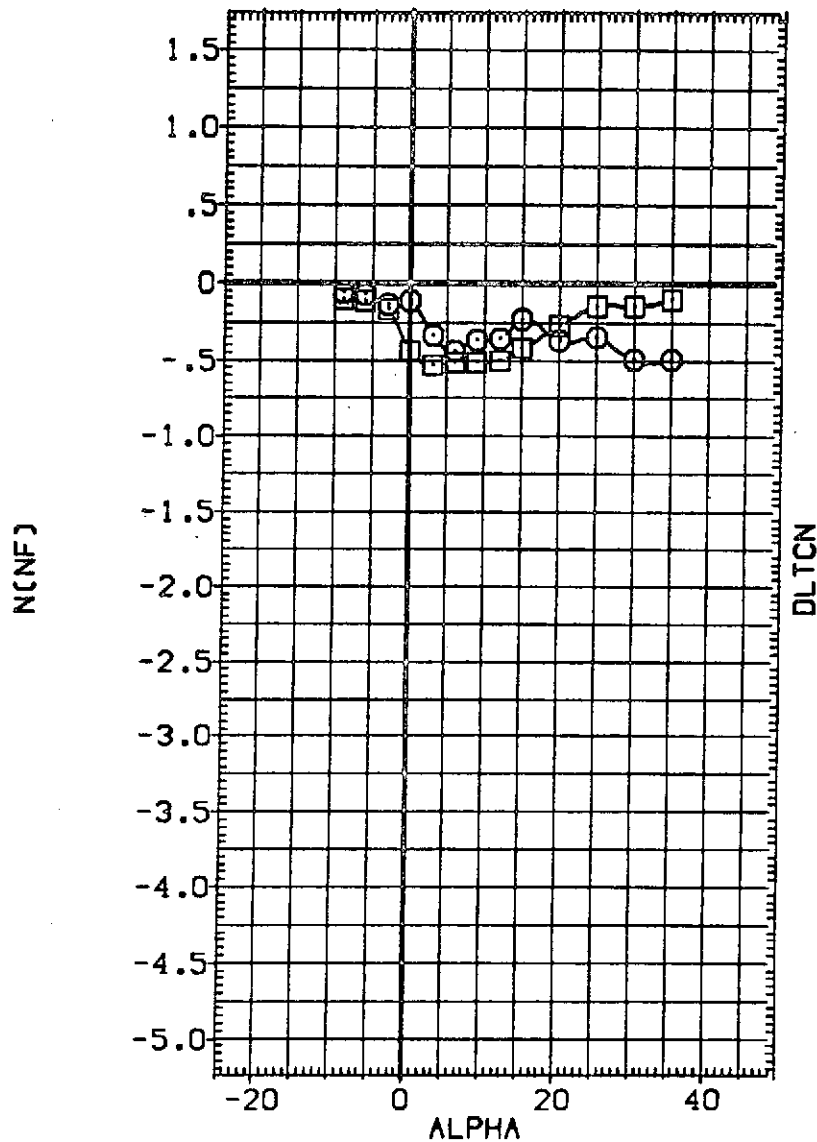


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| [CHLC09] ○ | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 [AIR] |
| [CHLC07] □ | 0A82 CFHT113 MODEL 32-0 OR8 V/N81N52 [AIR] |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

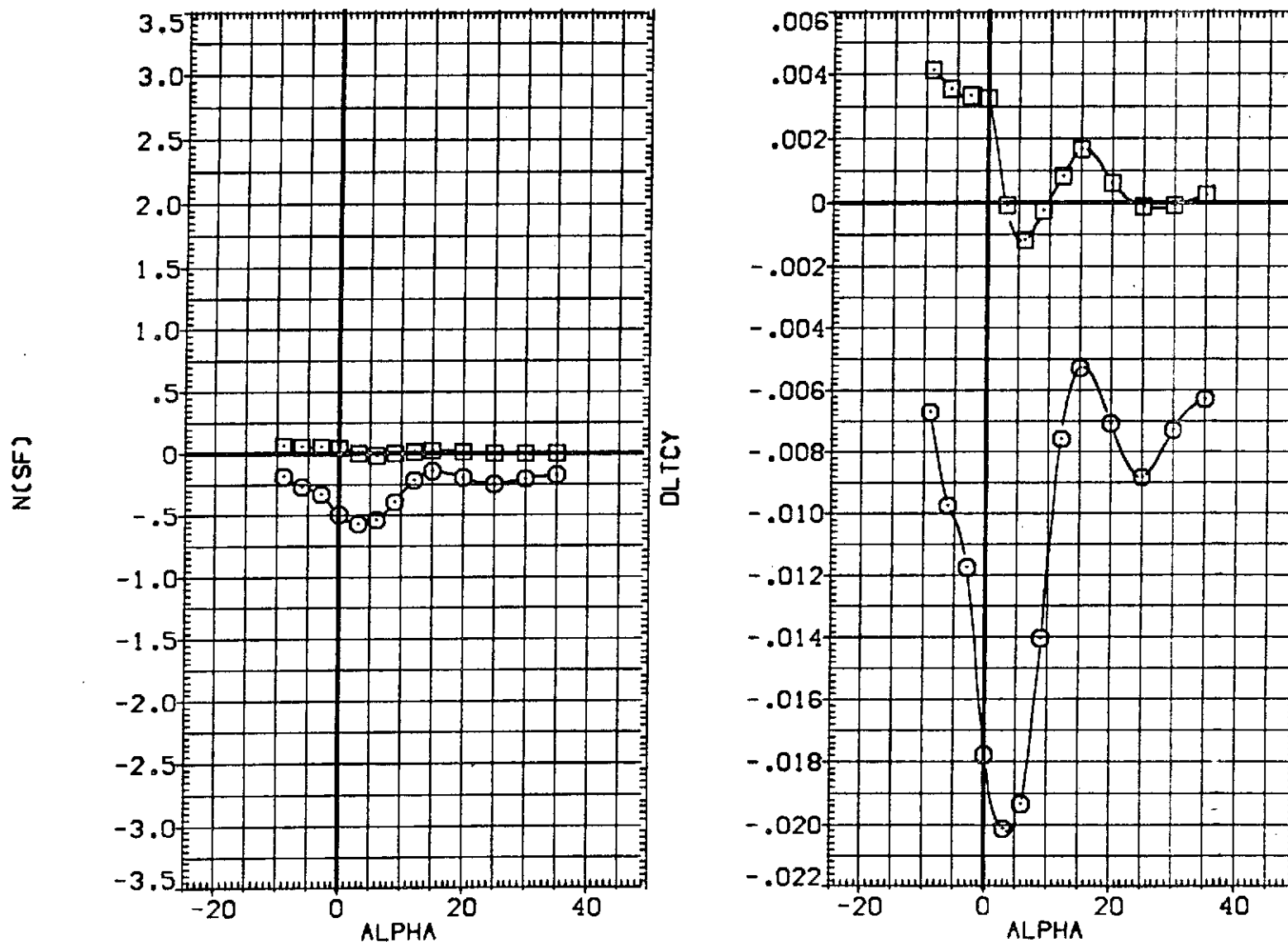


FIG. 10 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN PITCH

(A)MACH = 10.30

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| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL02) | 0A82 CFHT113 MODEL 32-0 GR8 V/N84 RCS OFF | 150,000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL008) | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) | 150,000 | 155,000 | 68,000 | 47,500 | LREF | 474.8100 IN. |
| (RHL006) | 0A82 CFHT113 MODEL 32-0 GR8 V/N81N52 (AIR) | 150,000 | 157,000 | 68,000 | 47,500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

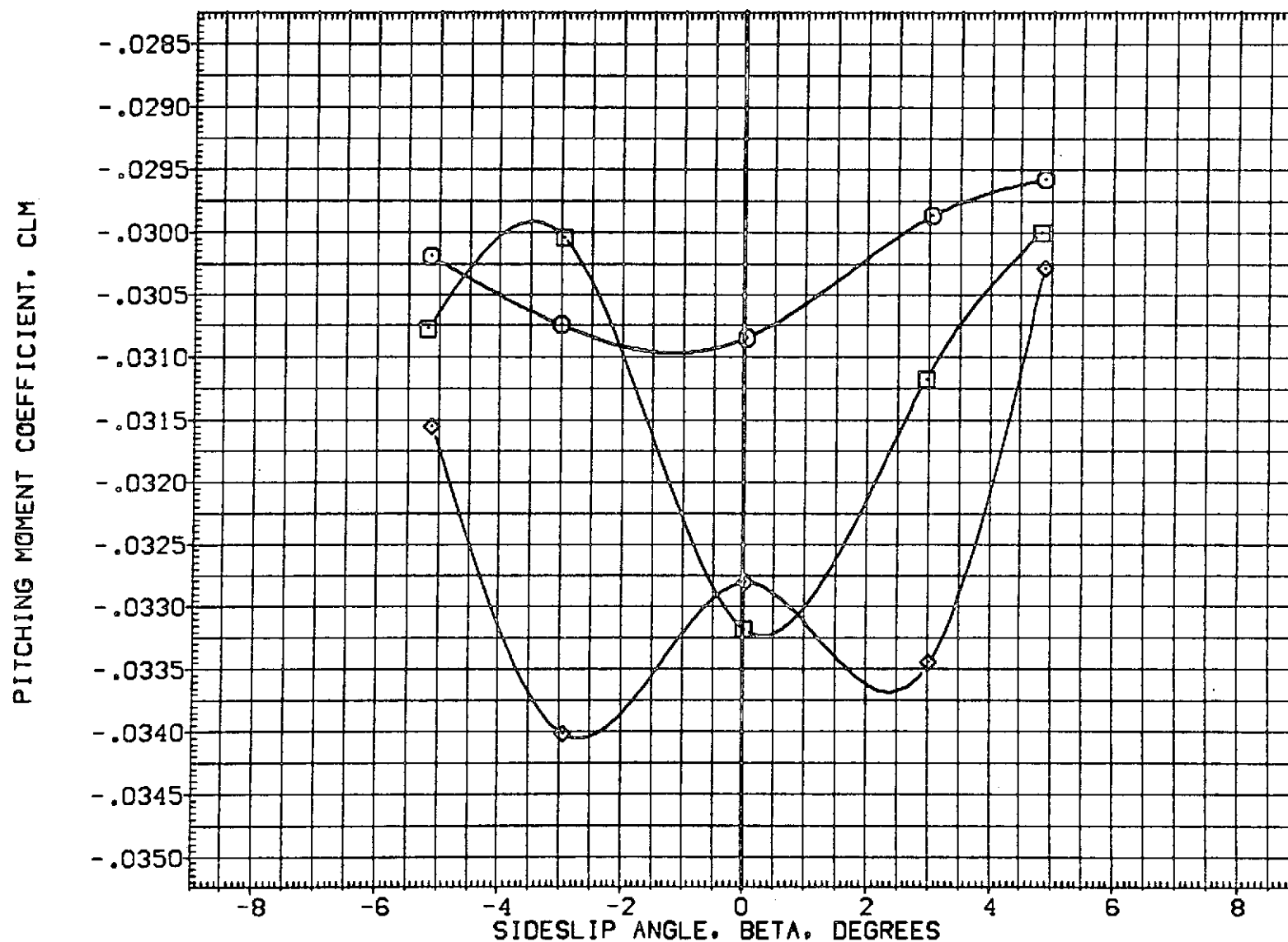


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|--------|
| (RHLF02) | QA82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2680.0000 | SQ.FT. |
| (RHL008) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL006) | QA82 CFHT113 MODEL 32-0 ORB V/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

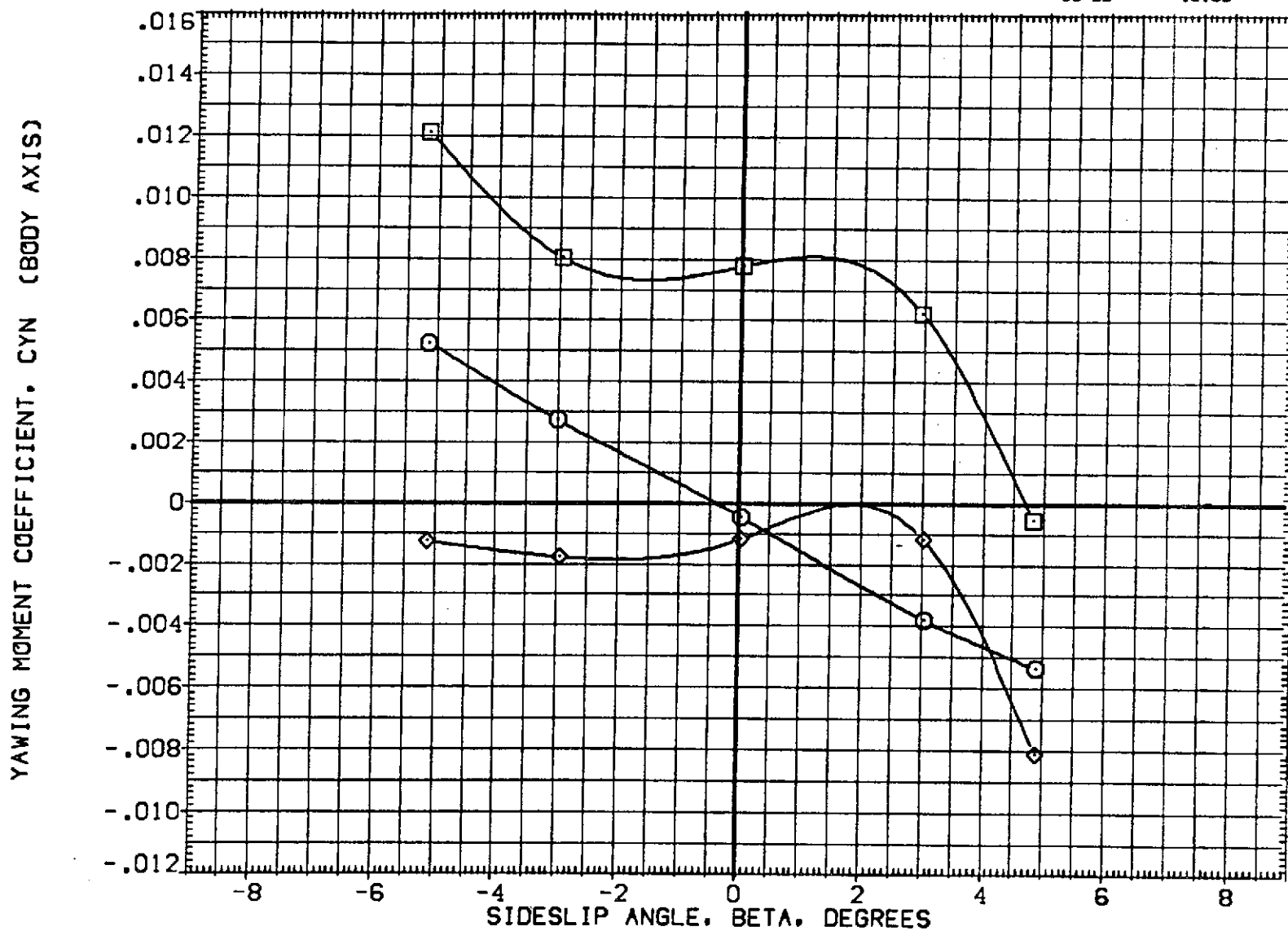


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|--------|
| (RHLFD2) | QA82 CFHT113 MODEL 32-0 ORB V/NB4 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHL008) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL006) | QA82 CFHT113 MODEL 32-0 ORB V/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

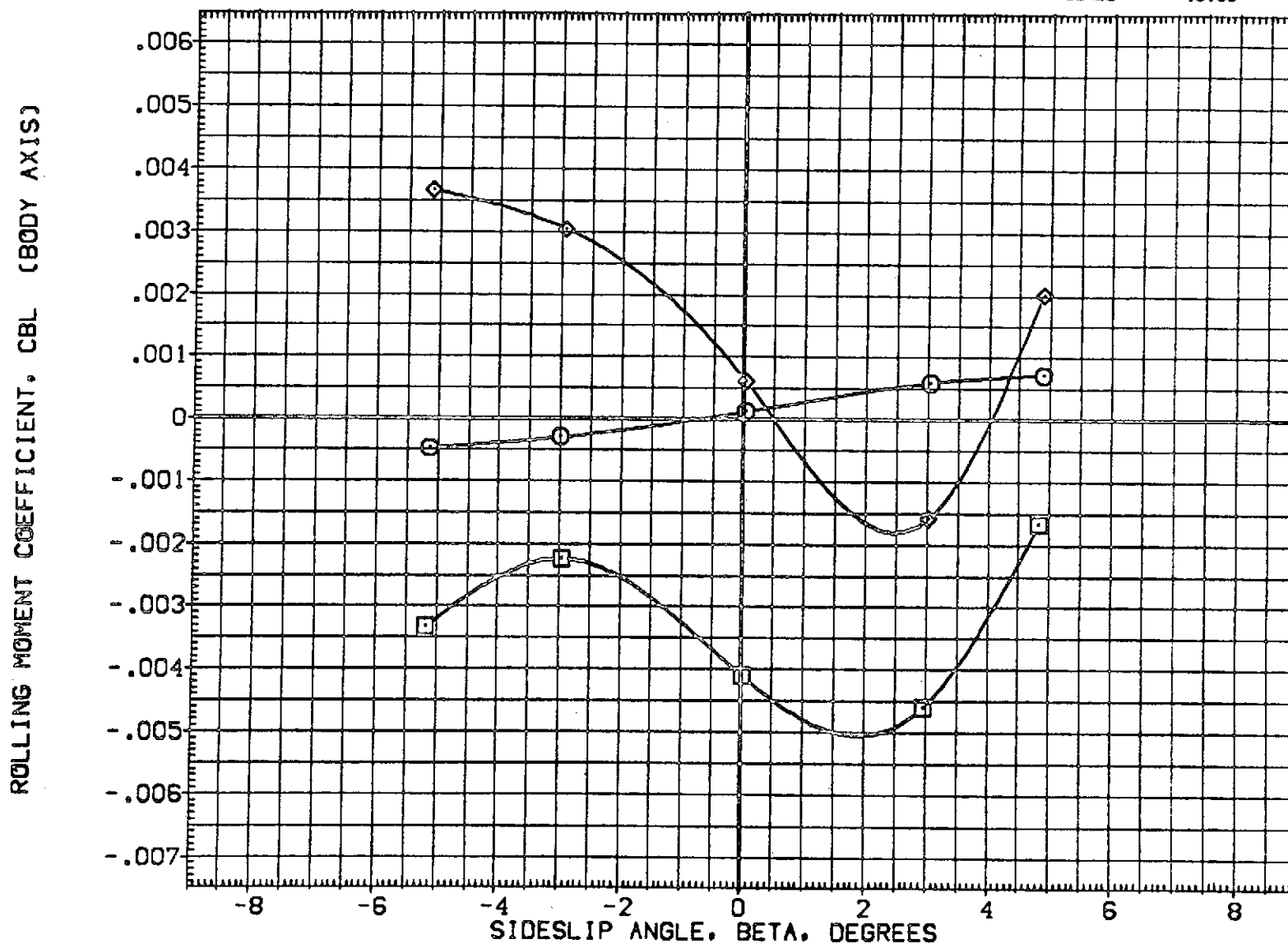


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| [RHLF02] | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHL008] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| [RHL006] | 0A82 CFHT113 MODEL 32-0 ORB V/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

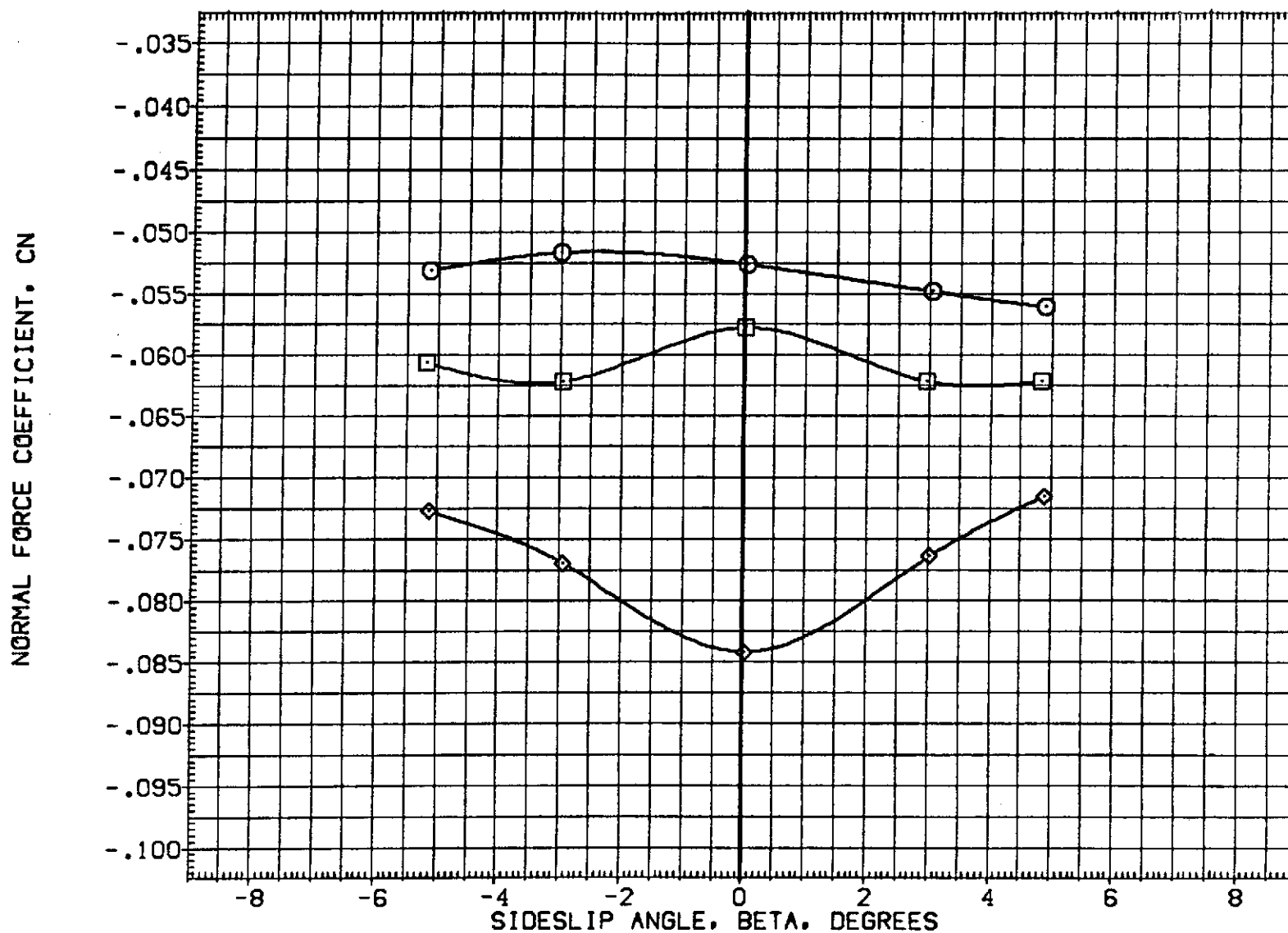


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|---------|
| (RHLF02) | 0A82 CFHT113 MODEL 32-0 GRB V/N24 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL008) | 0A82 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL006) | 0A82 CFHT113 MODEL 32-0 GRB V/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

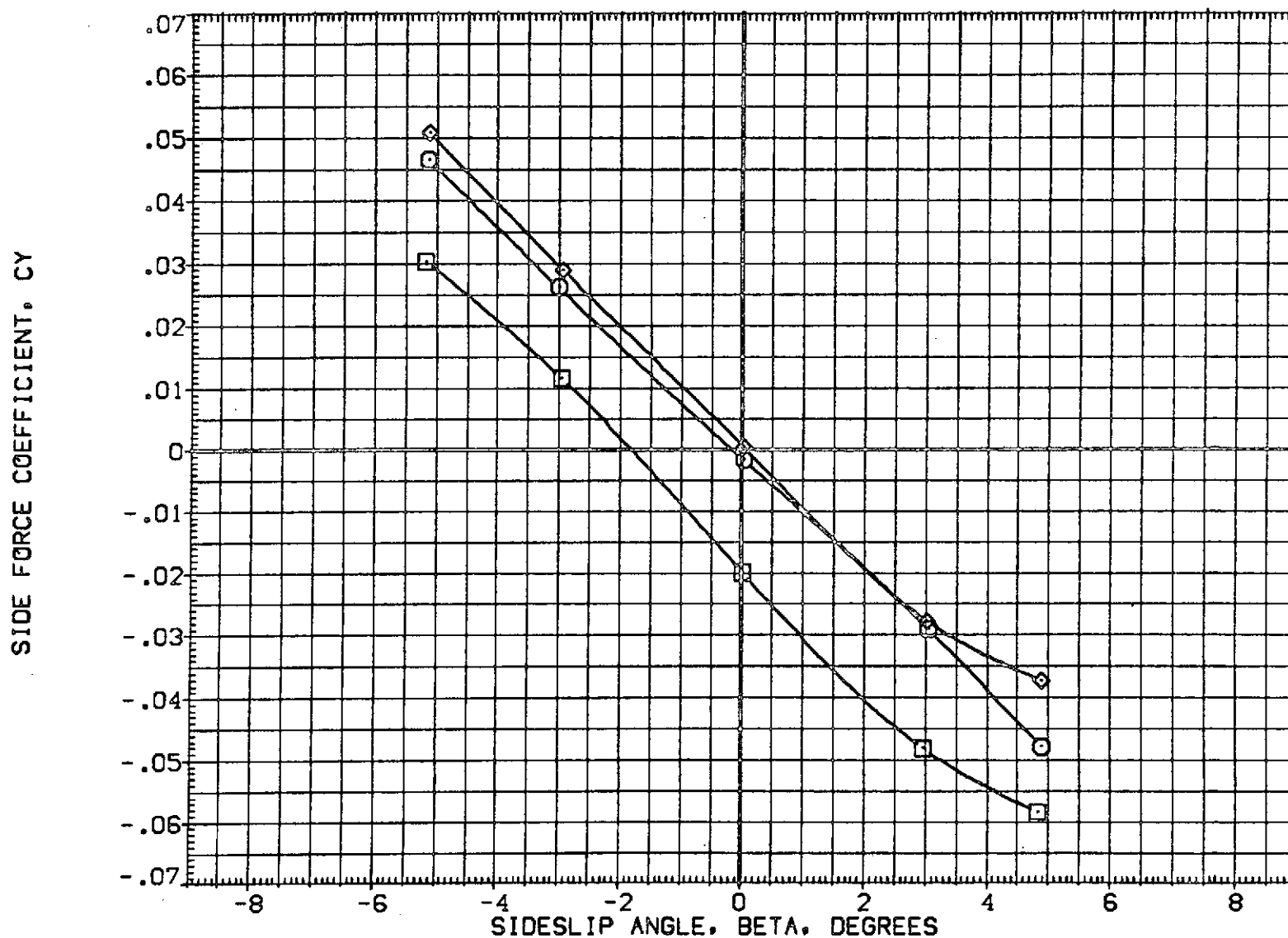


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL002) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL008) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL006) | QAB2 CFHT113 MODEL 32-0 ORB V/N81N52 (AIR) | 150.000 | 157.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

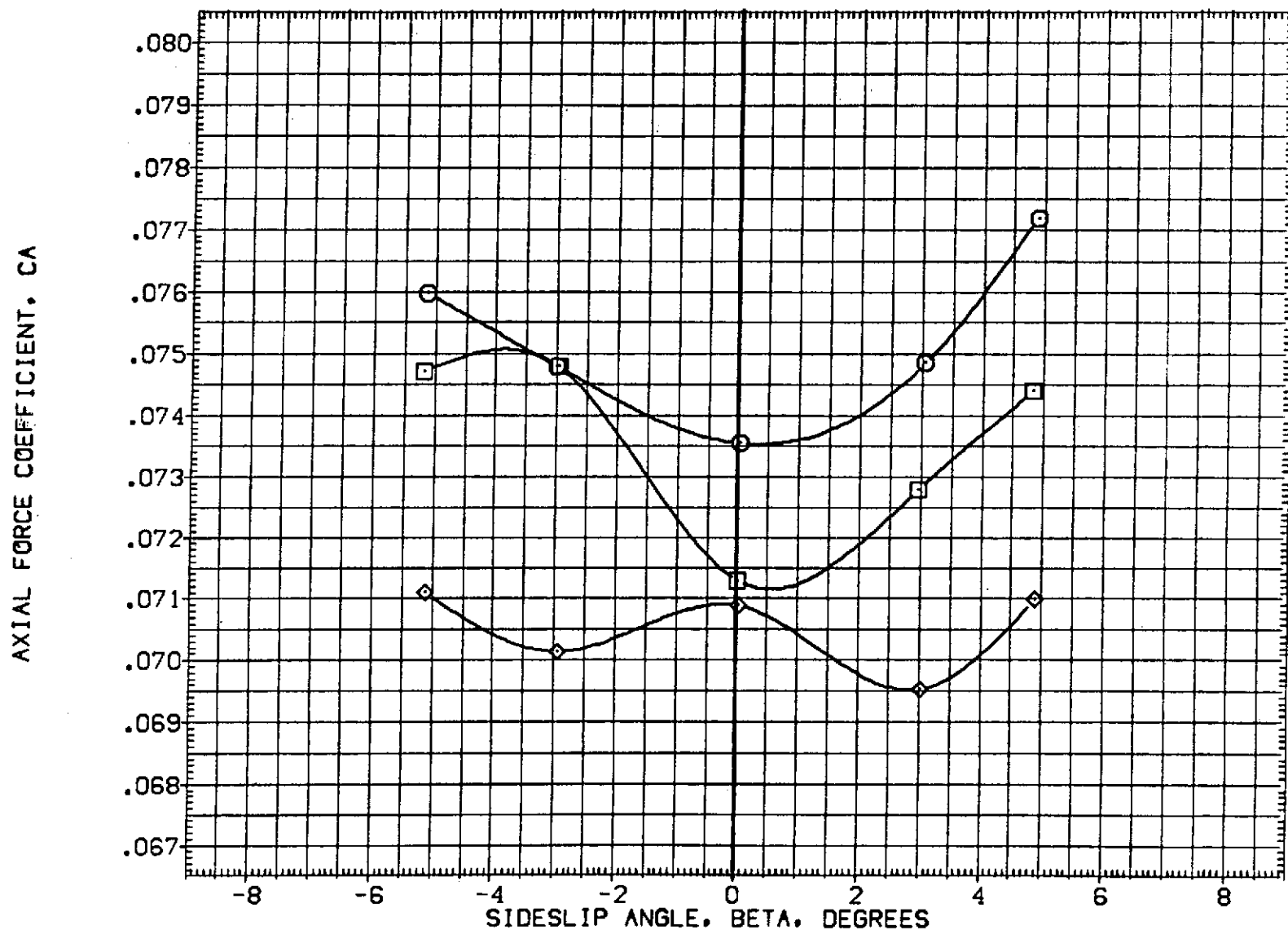




FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC08)  0A82 CFHT113 MODEL 32-0 ORB W/NS2 (AIR)
 (CHLC06)  0A82 CFHT113 MODEL 32-0 ORB W/NS1NS2 (AIR)

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|---------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

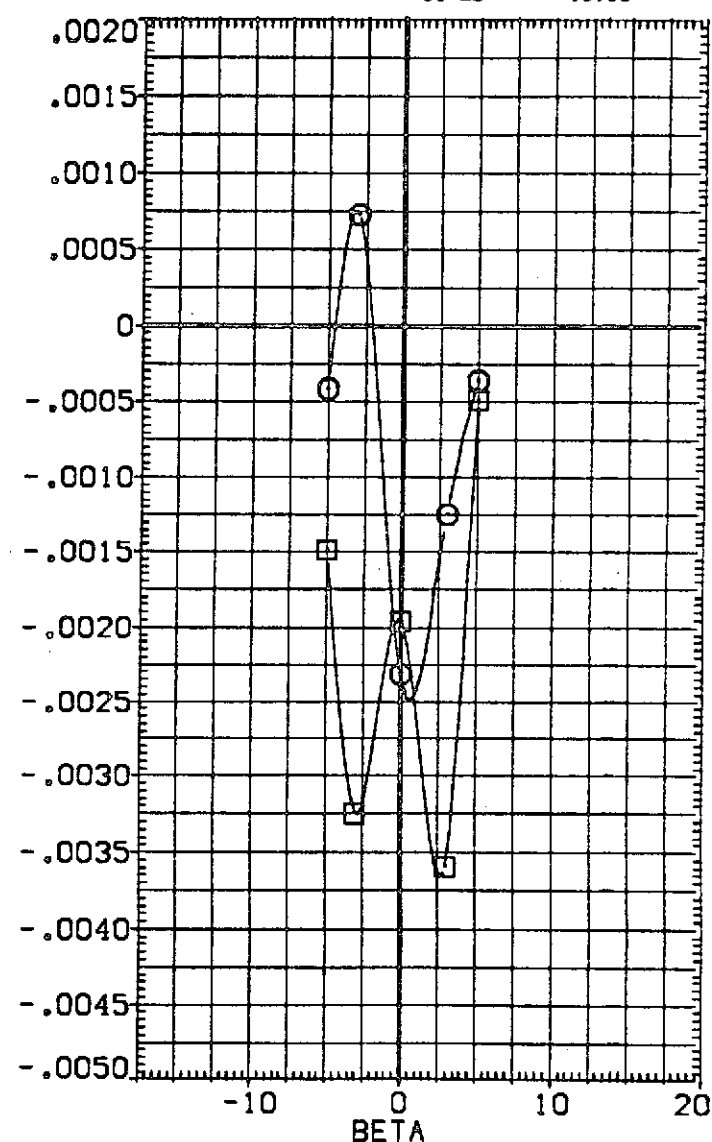
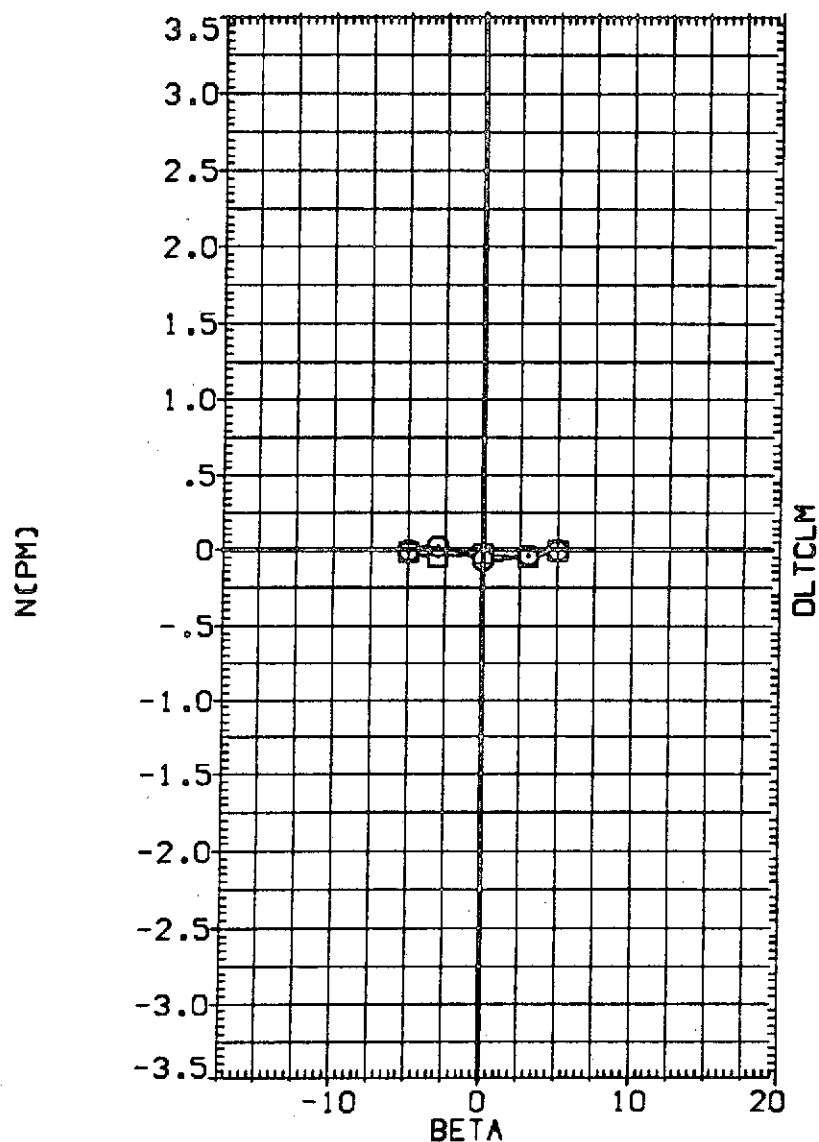


FIG. 11 EFFECT OF NS2 AND NS2N81 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| [CHLC08] ○ | 0A82 CFHT113 MODEL 32-0 GR8 W/N52 (AIR) |
| [CHLC06] □ | 0A82 CFHT113 MODEL 32-0 GR8 W/N81N52 (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 69.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 157.000 | 69.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

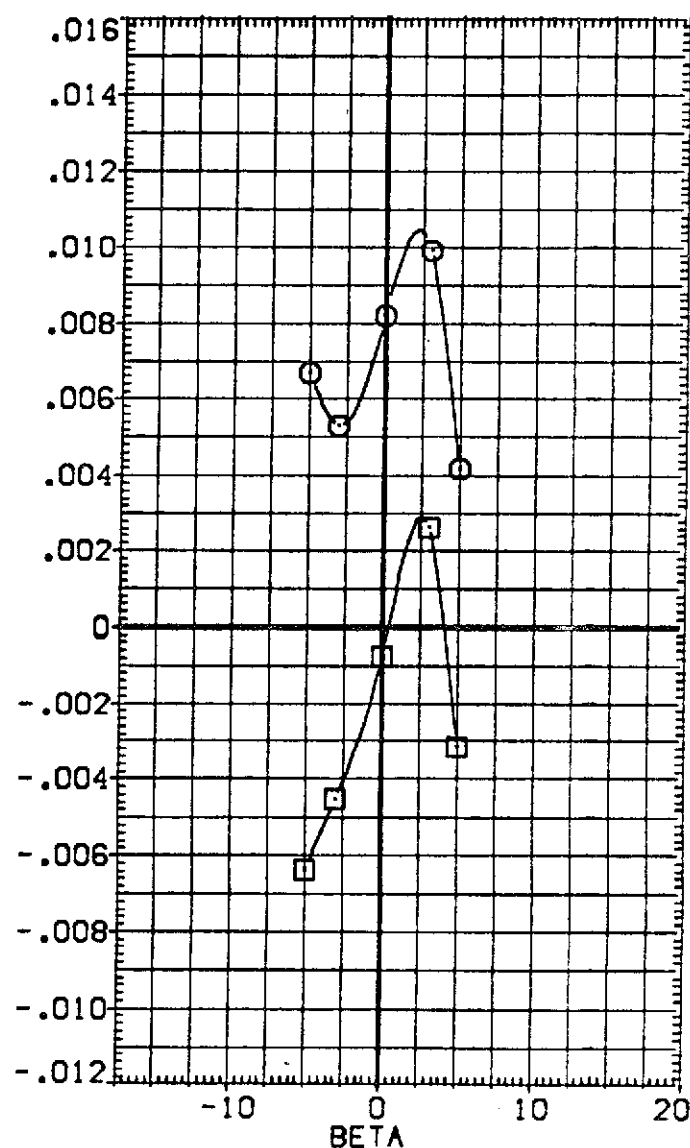
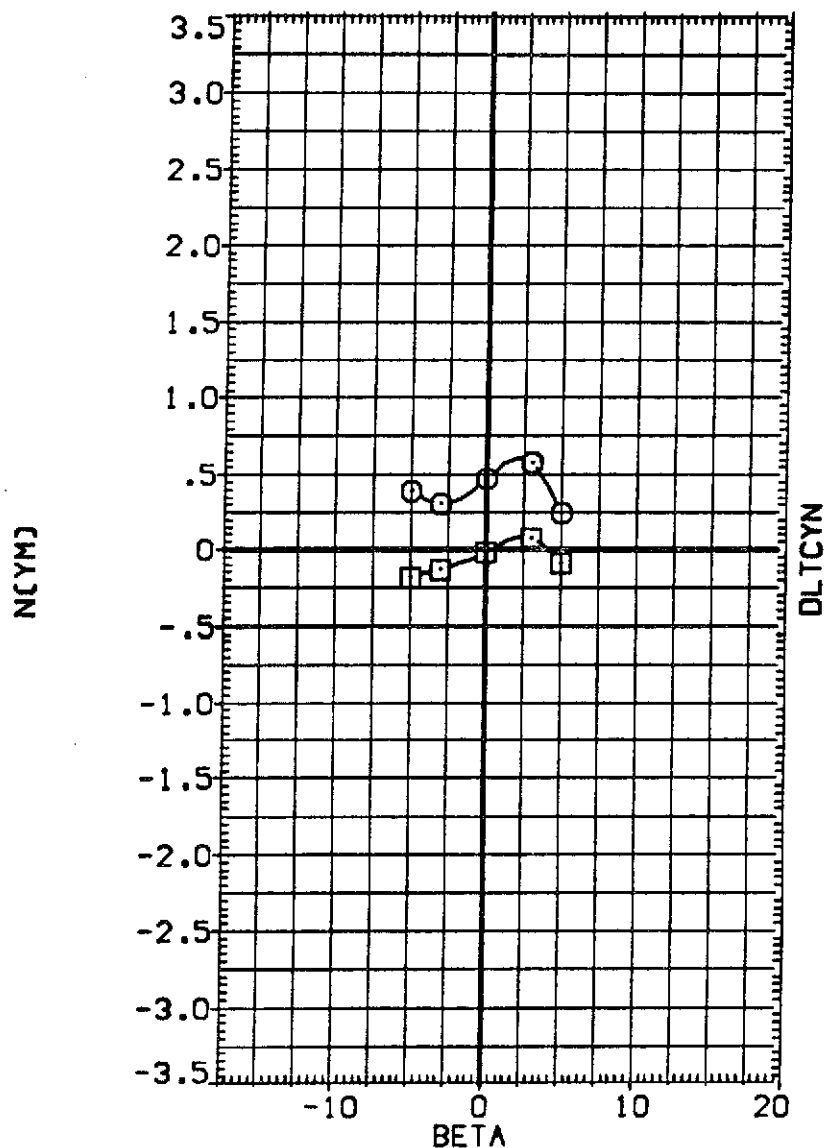


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC08) ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| (CHLC08) □ | 0A82 CFHT113 MODEL 32-0 ORB V/N81N52 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 69.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

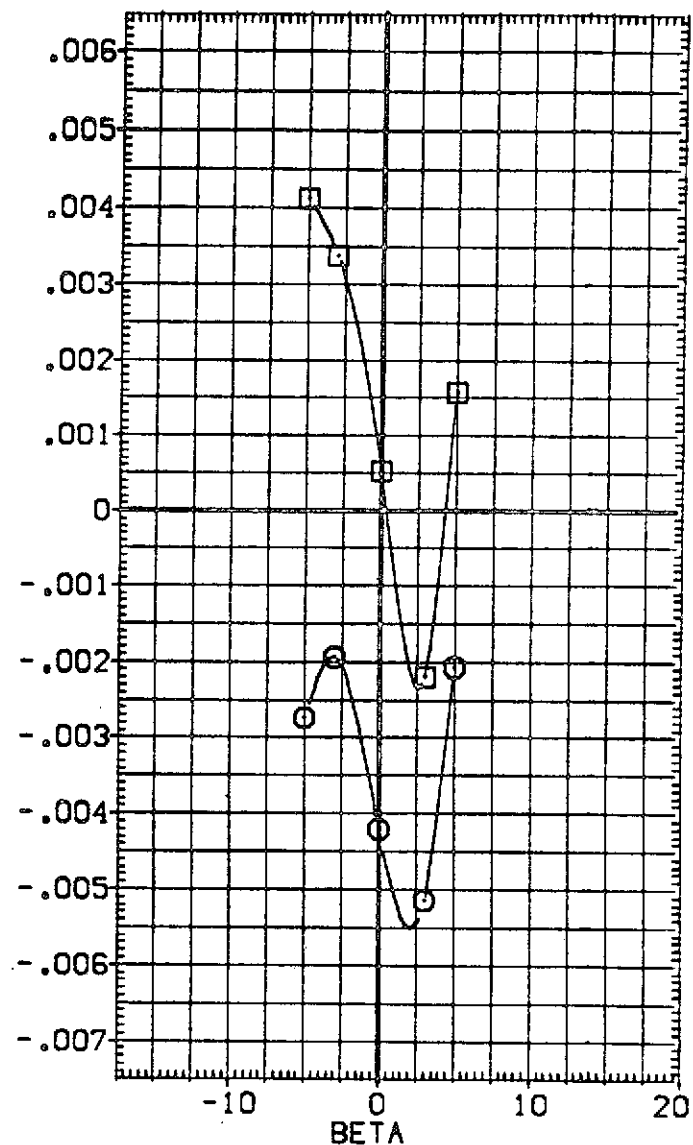
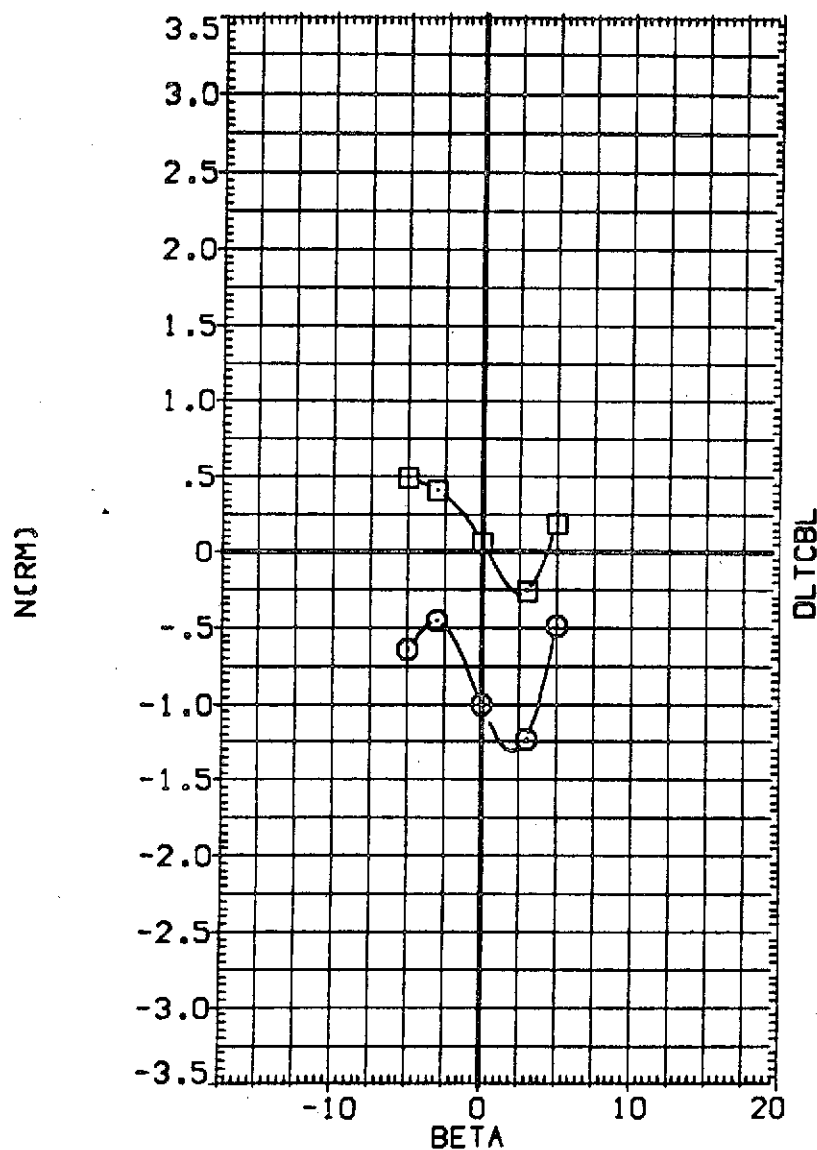


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLC08) ○ | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) |
| (CHLC06) □ | 0A82 CFHT113 MODEL 32-0 GR8 V/N81N52 (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2680.0000 | 50.FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | BREF | 936.6900 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

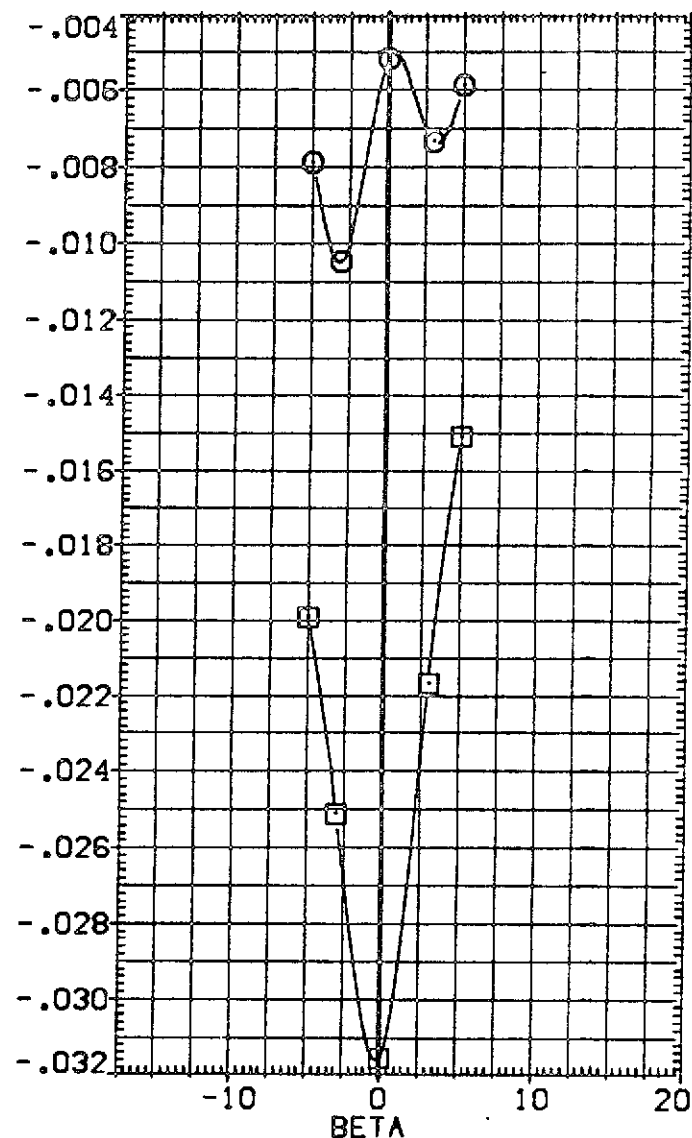
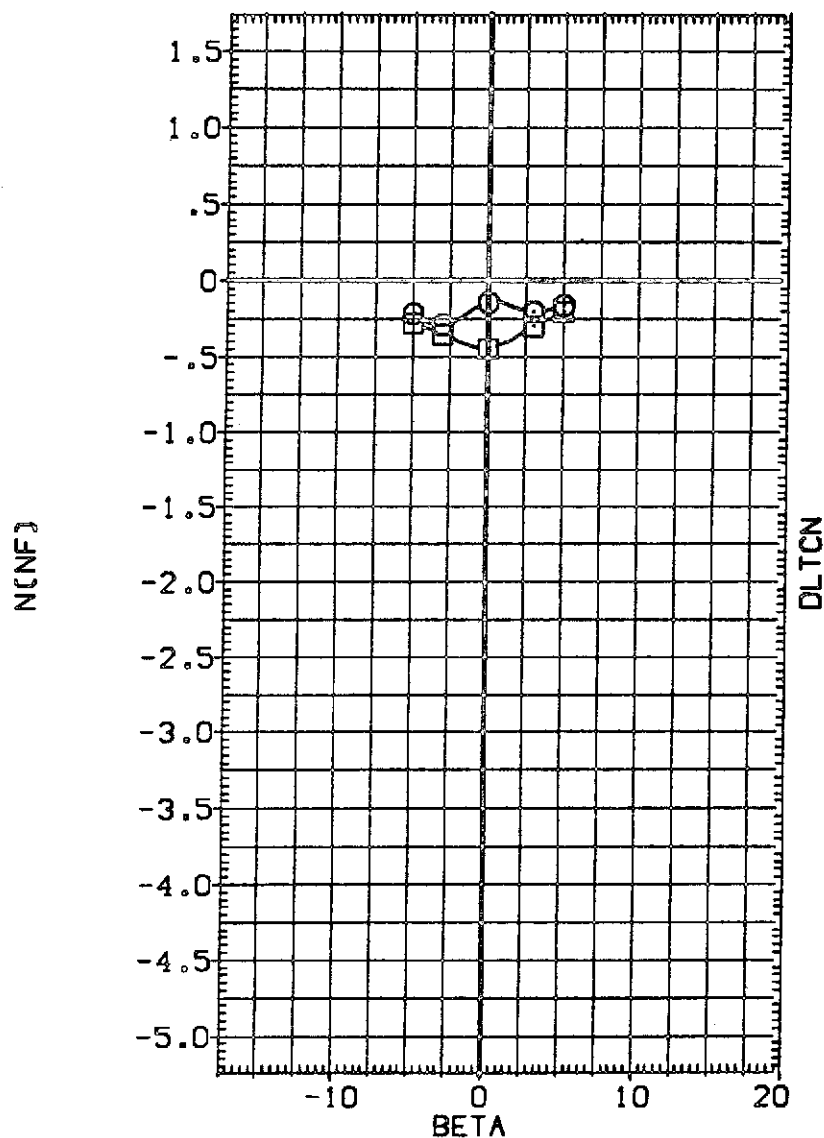


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| [CHLC08] | 0AB2 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC08] | 0AB2 CFHT113 MODEL 32-0 ORB V/N52N81 [AIR] |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2680.0000 50.FT. |
| 150.000 | 157.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

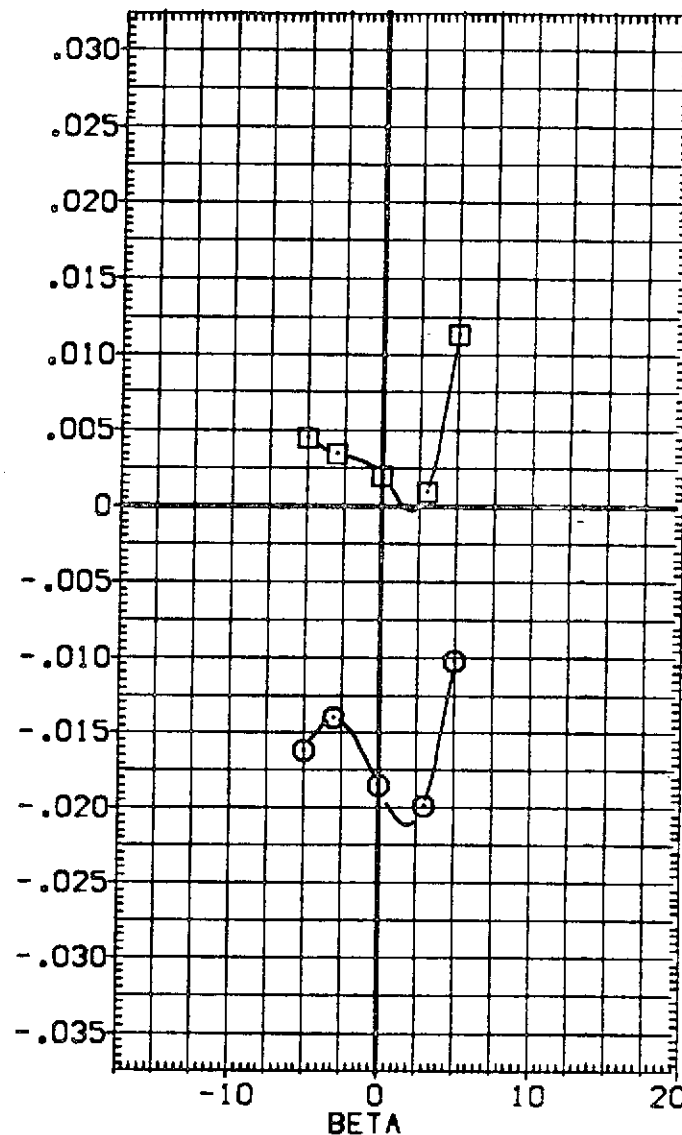
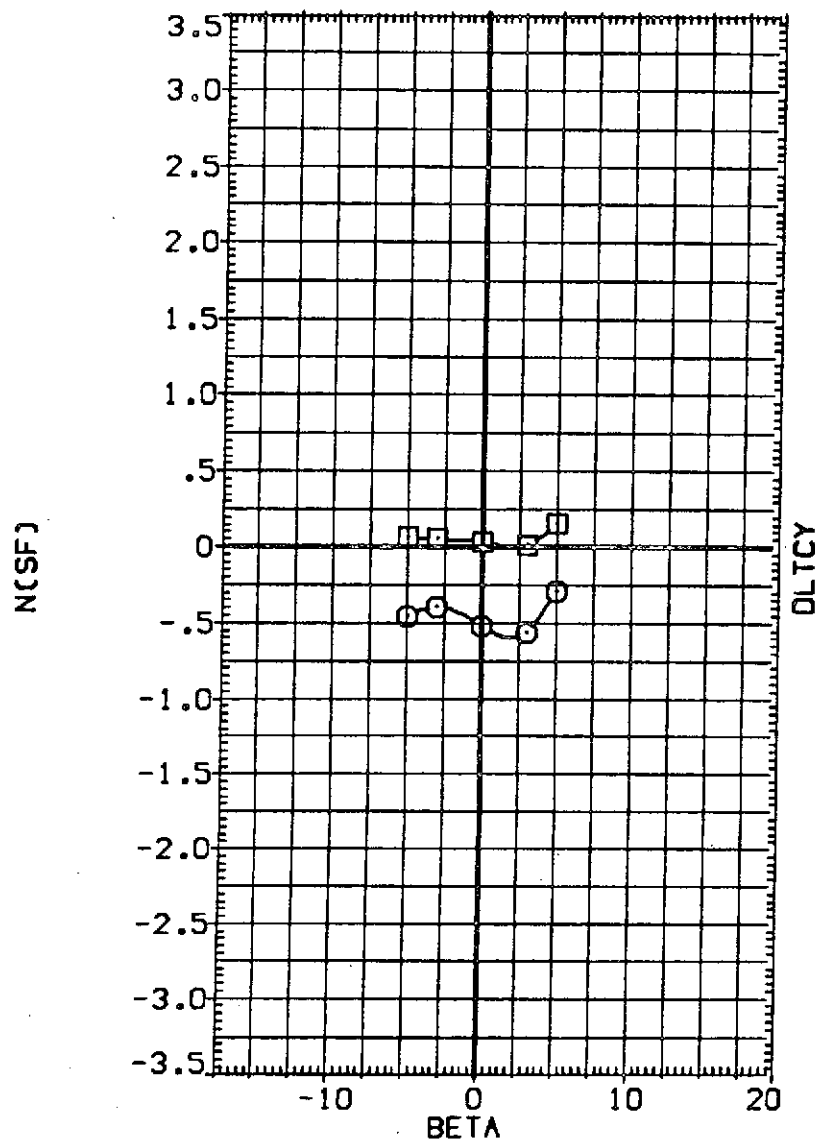


FIG. 11 EFFECT OF N52 AND N52N81 USING AIR ON AERO. CHARACT. IN SIDESLIP
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|--|---------|---------|--------|--------|-----------------------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL005) | QAB2 CFHT113 MODEL 32-0 ORB V/N49N52 (AIR) | 150.000 | 155.000 | 69.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRF 1076.7000 IN. |
| | | | | | | YMRF .0000 IN. |
| | | | | | | ZMRF 375.0000 IN. |
| | | | | | | SCALE .0100 |

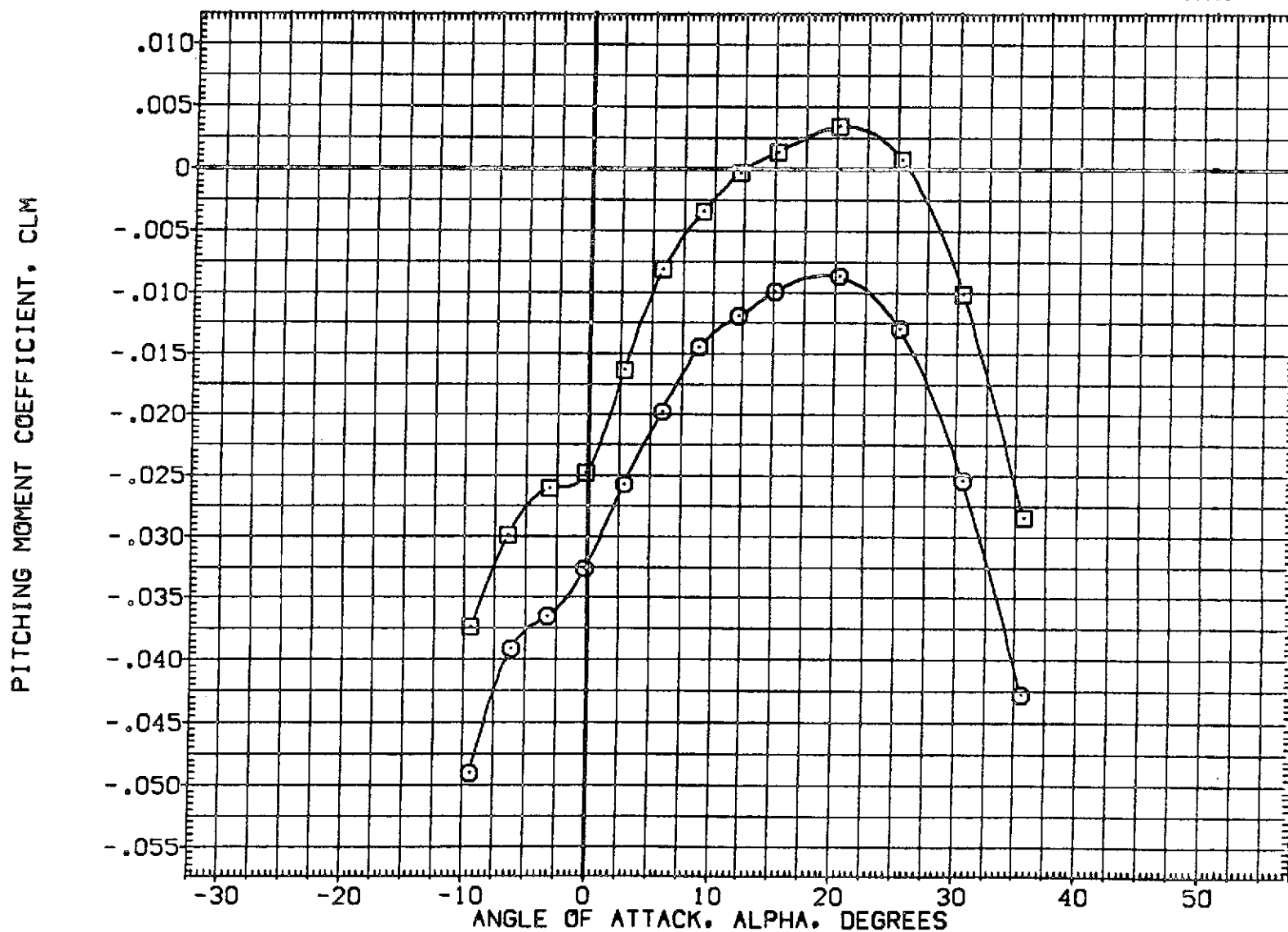


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL005) | 0A82 CFHT113 MODEL 32-0 ORB V/N49N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | | | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

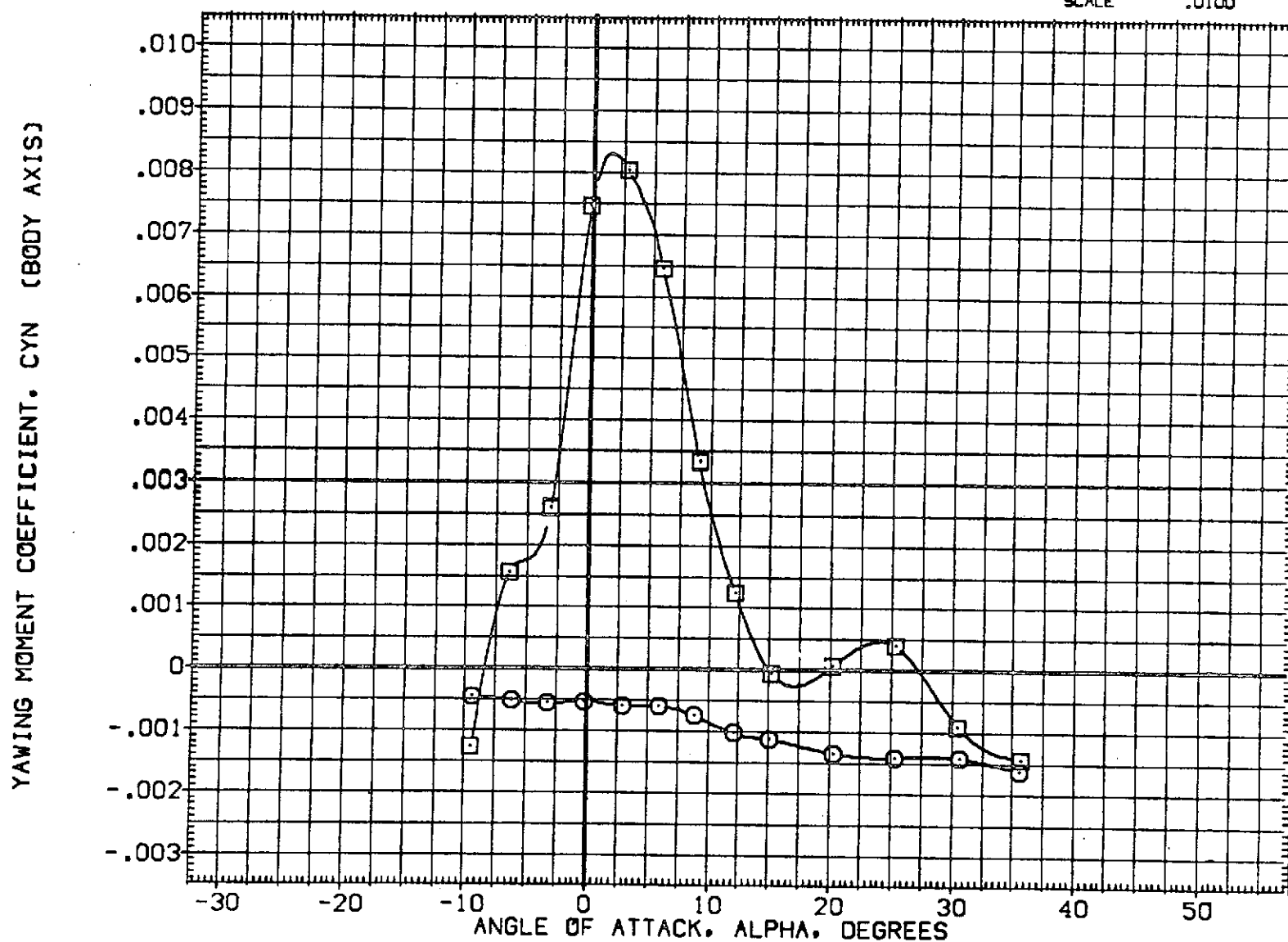


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|---------|
| {RHLFO4} | QAB2 CFHT113 MODEL 32-0 CR8 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| {RHL005} | QAB2 CFHT113 MODEL 32-0 CR8 V/N49N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | | | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

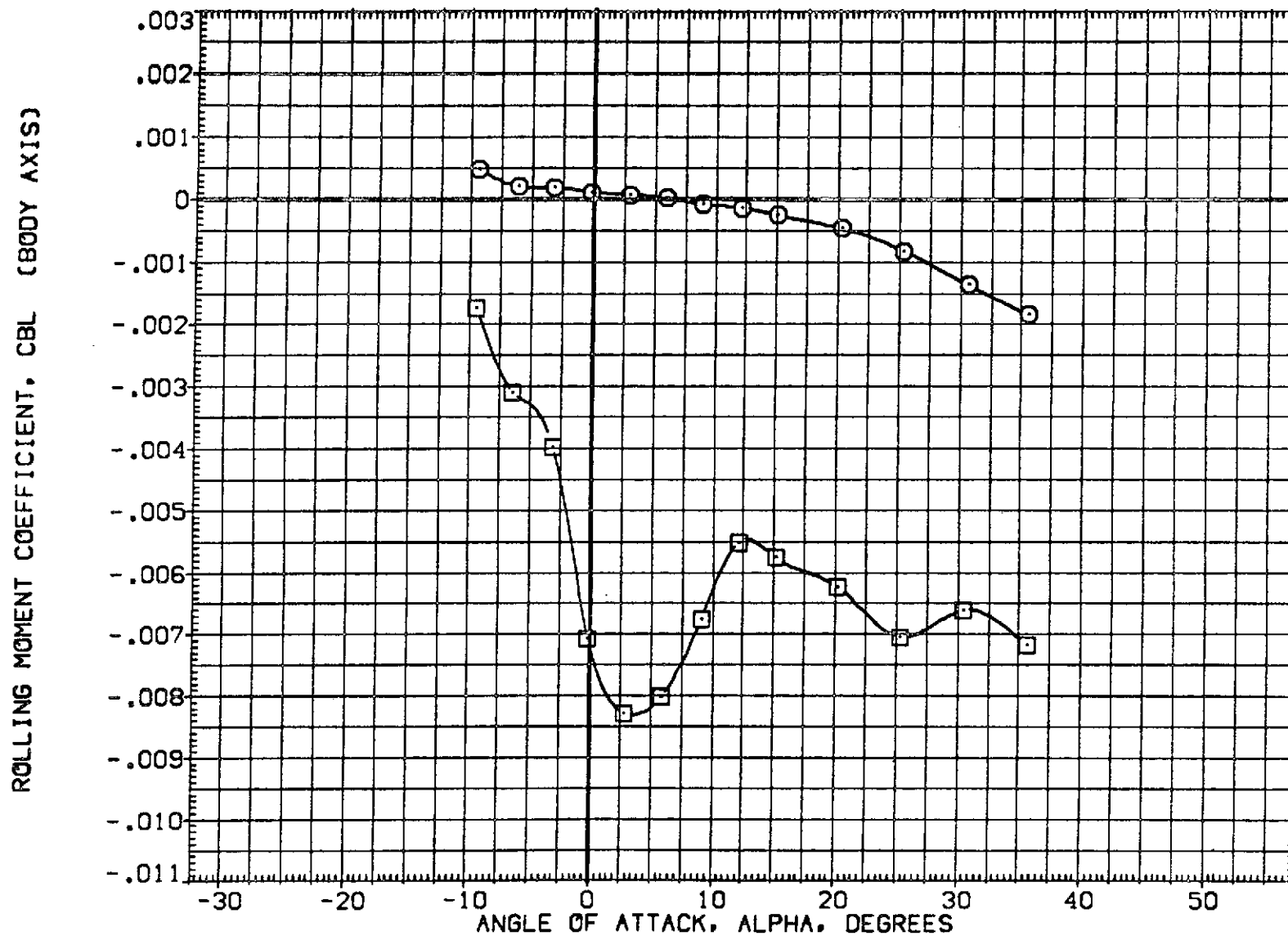


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|-----------------|--|---------|---------|--------|--------|-----------------------|-----------|---------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 ORB W/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL005) | QAB2 CFHT113 MODEL 32-0 ORB W/N49N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | | | BREF | 935.6900 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

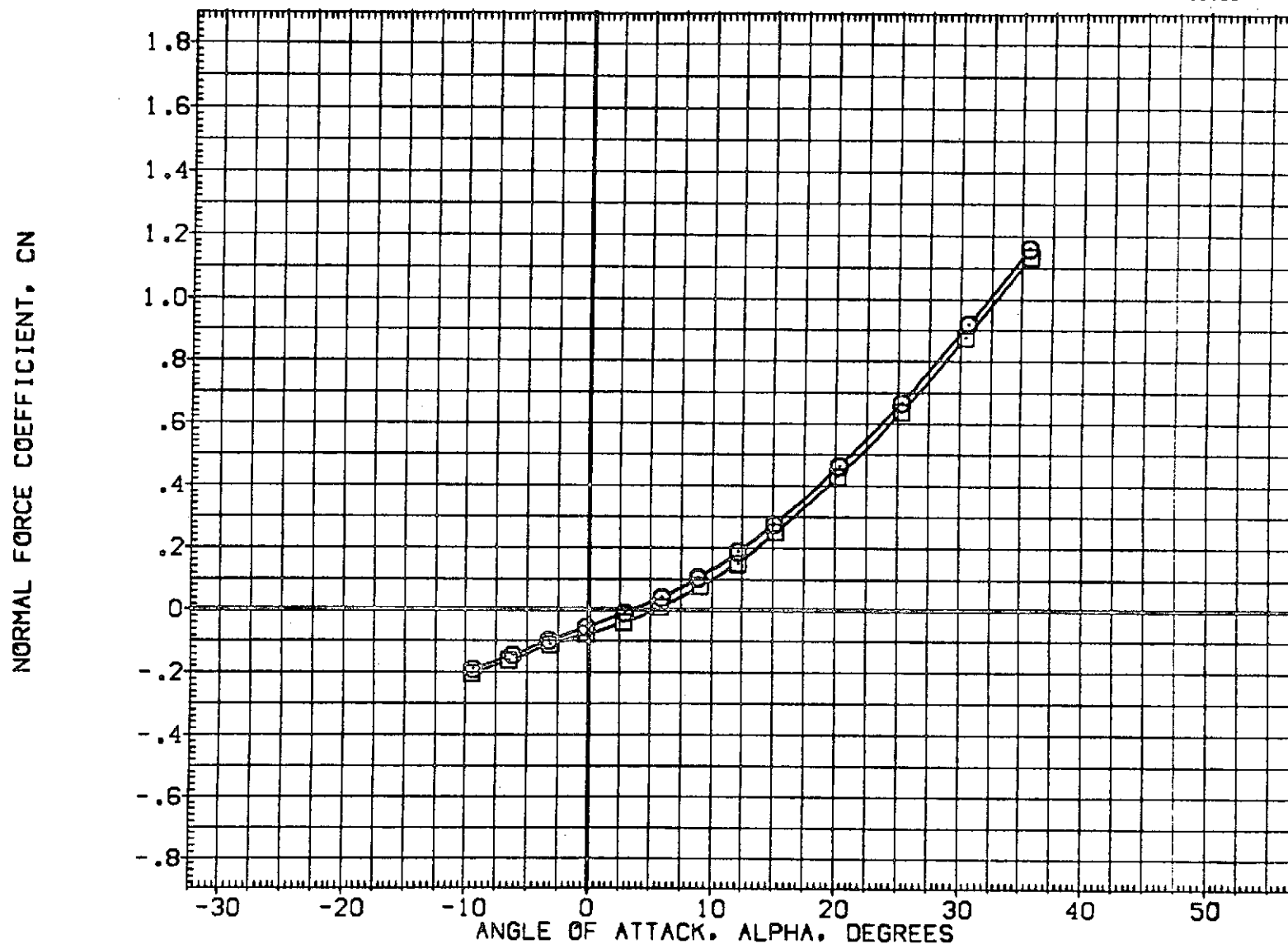


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH
 (A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|--|---------|---------|--------|--------|-----------------------|
| [RHL04] | 0A82 CFHT113 MODEL 32-0 GR8 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [RHL005] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 935.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |



FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHLFO4) | 0A82 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2680.0000 SQ.FT. |
| (RHL005) | 0A82 CFHT113 MODEL 32-0 GRB V/N49N52 [AIR] | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | | | BREF | 936.6800 IN. |
| | | | | | | XMRF | 1076.7000 IN. |
| | | | | | | YMRF | .0000 IN. |
| | | | | | | ZMRF | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

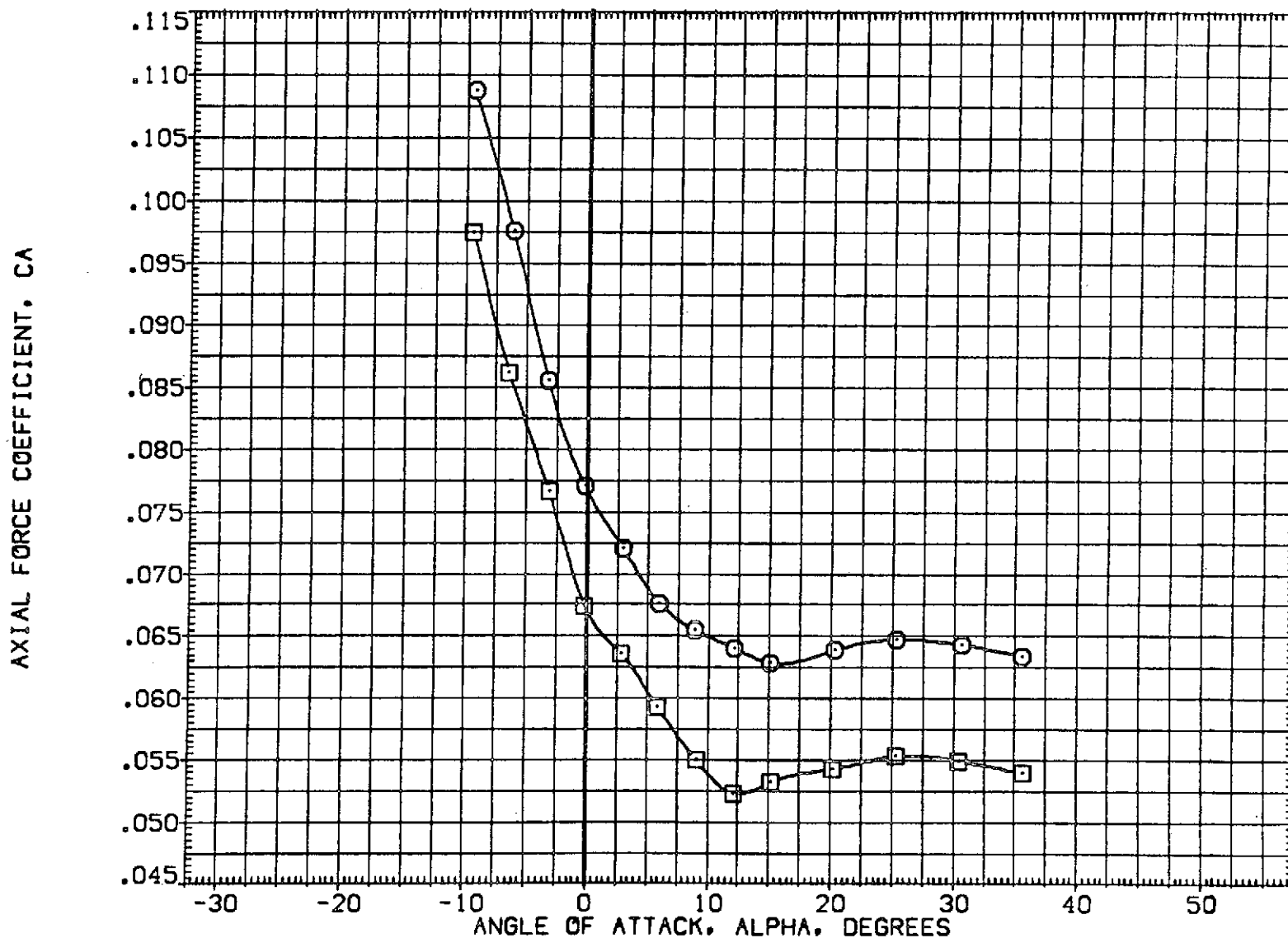


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC05) ○ OA82 CFHT113 MODEL 32-0 ORB V/N49N52 (AIR)

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2650.0000 SQ.FT. |
| | | | | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

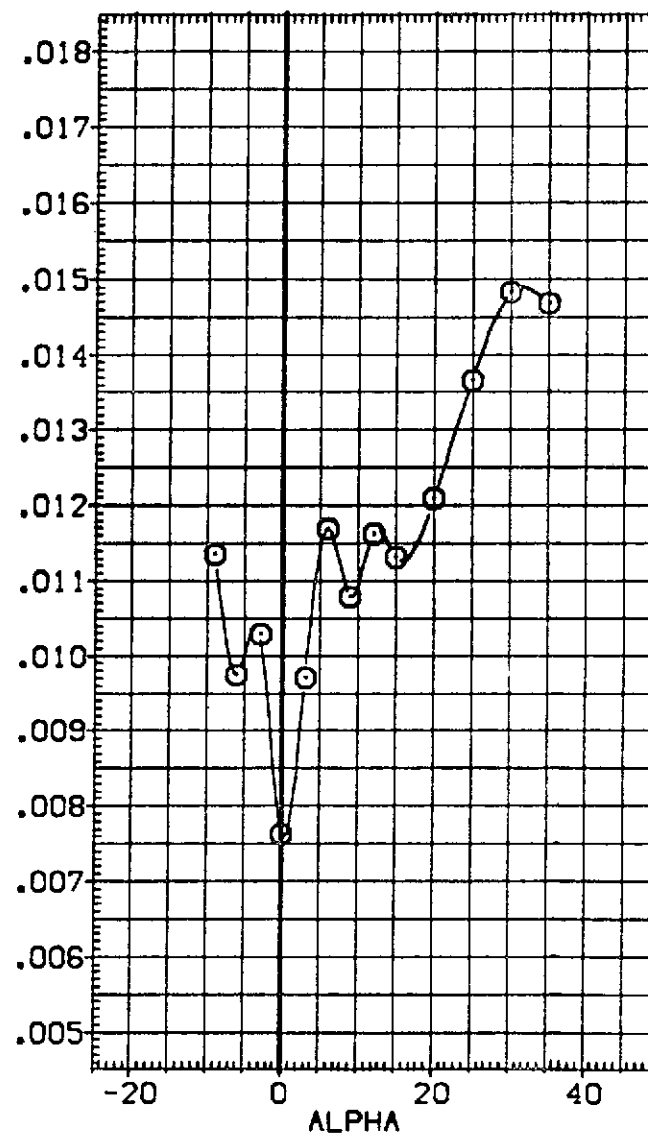
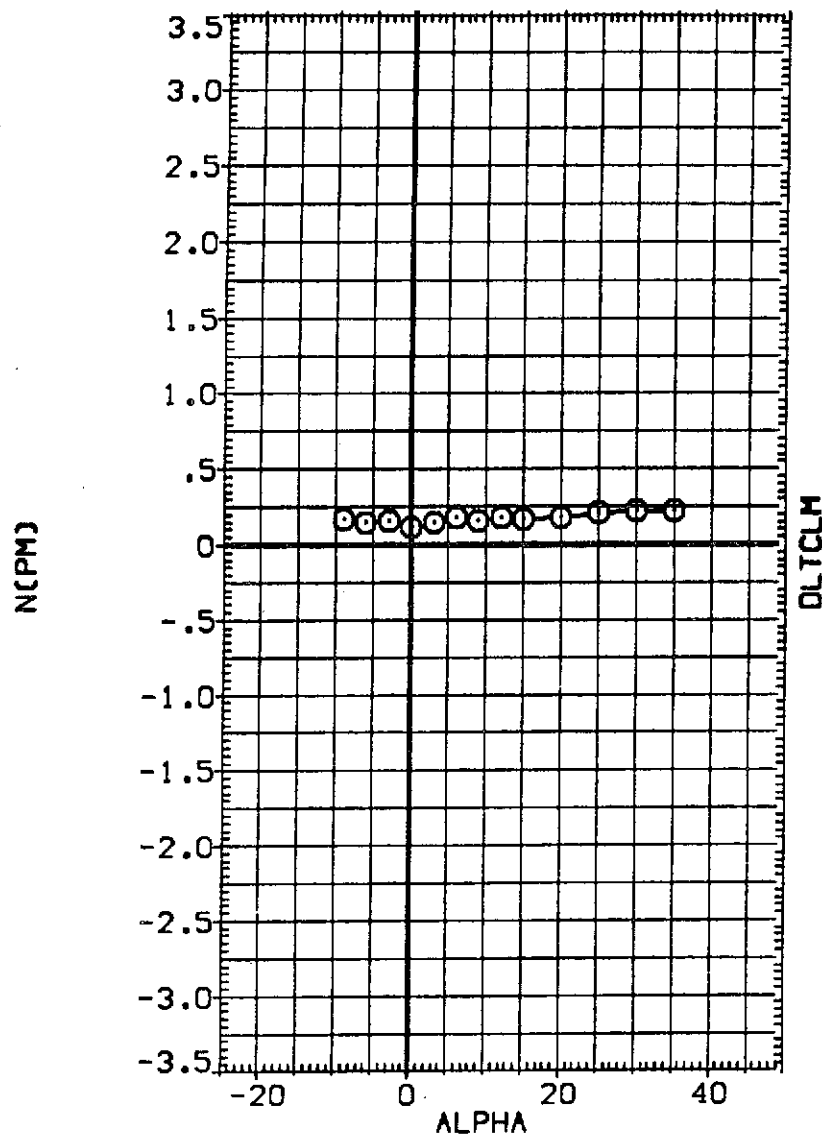


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC05) ○ QAS2 CFHT113 MODEL 32-0 ORB V/M49N52 (AIR)

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 69.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| | | | | LREF | 474.9100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

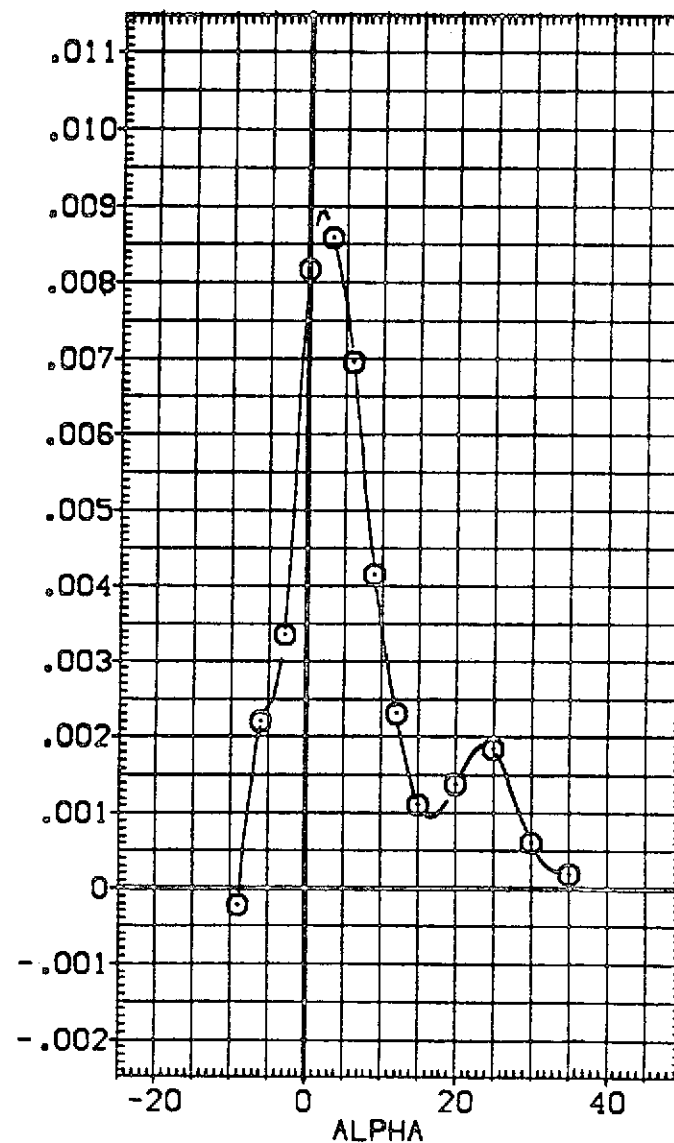
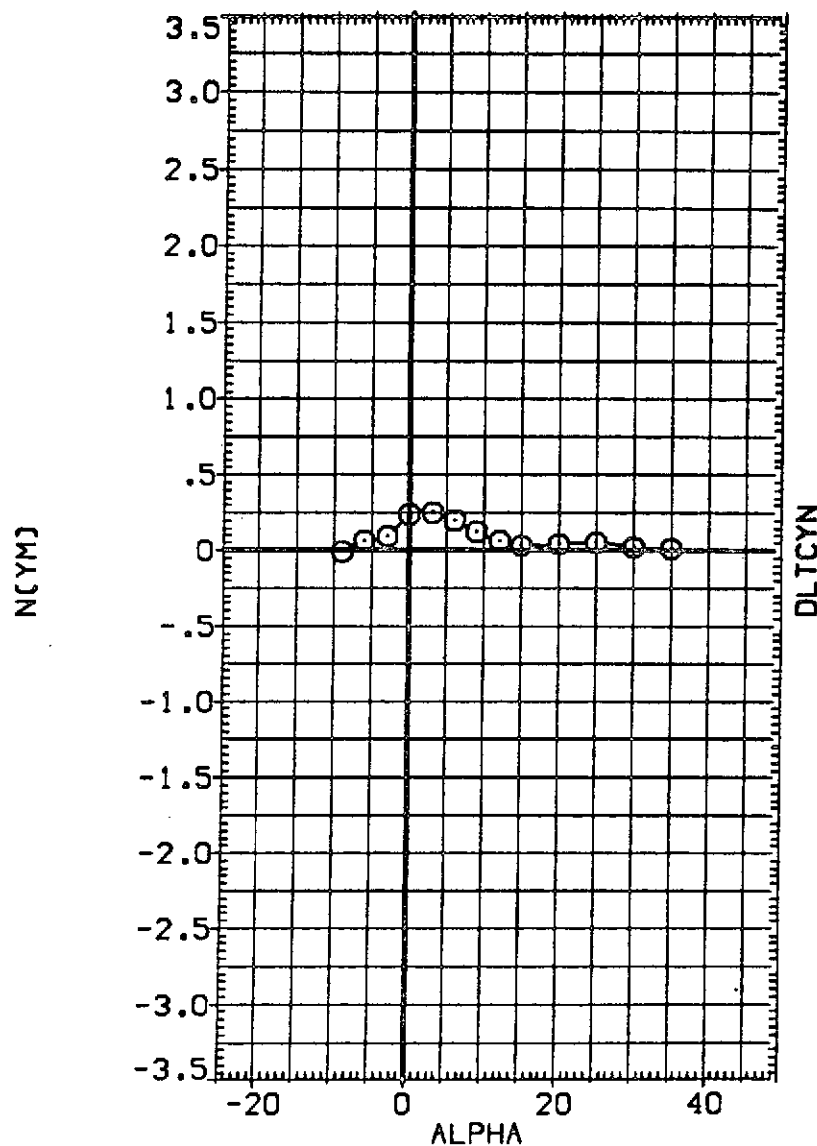


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.30

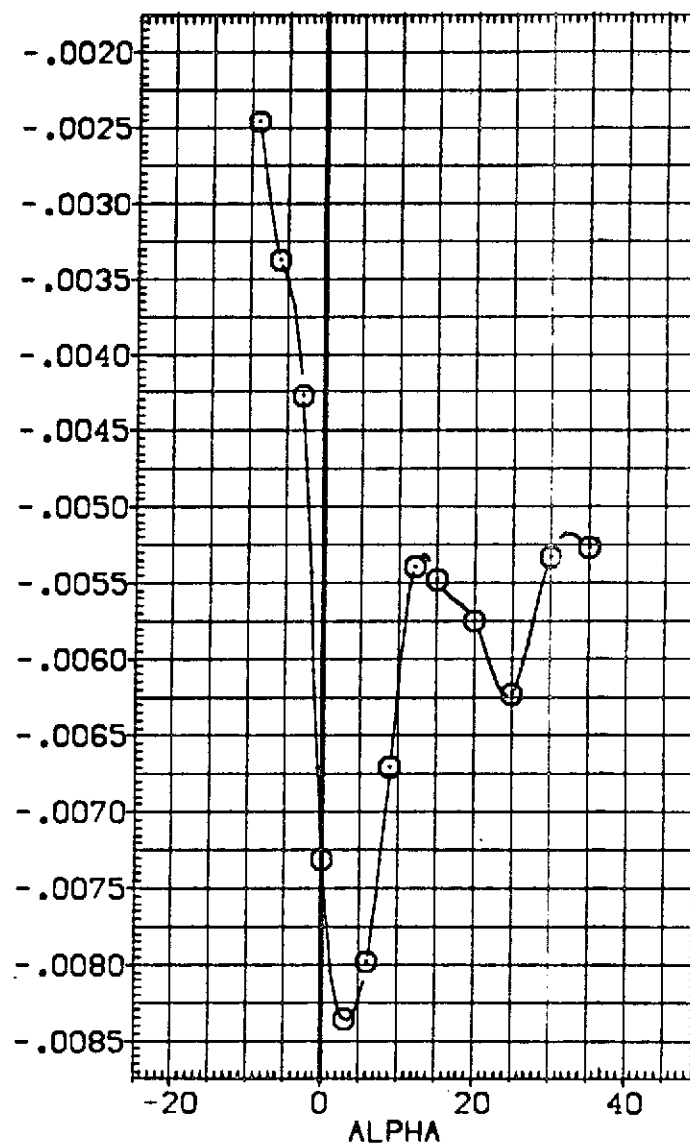
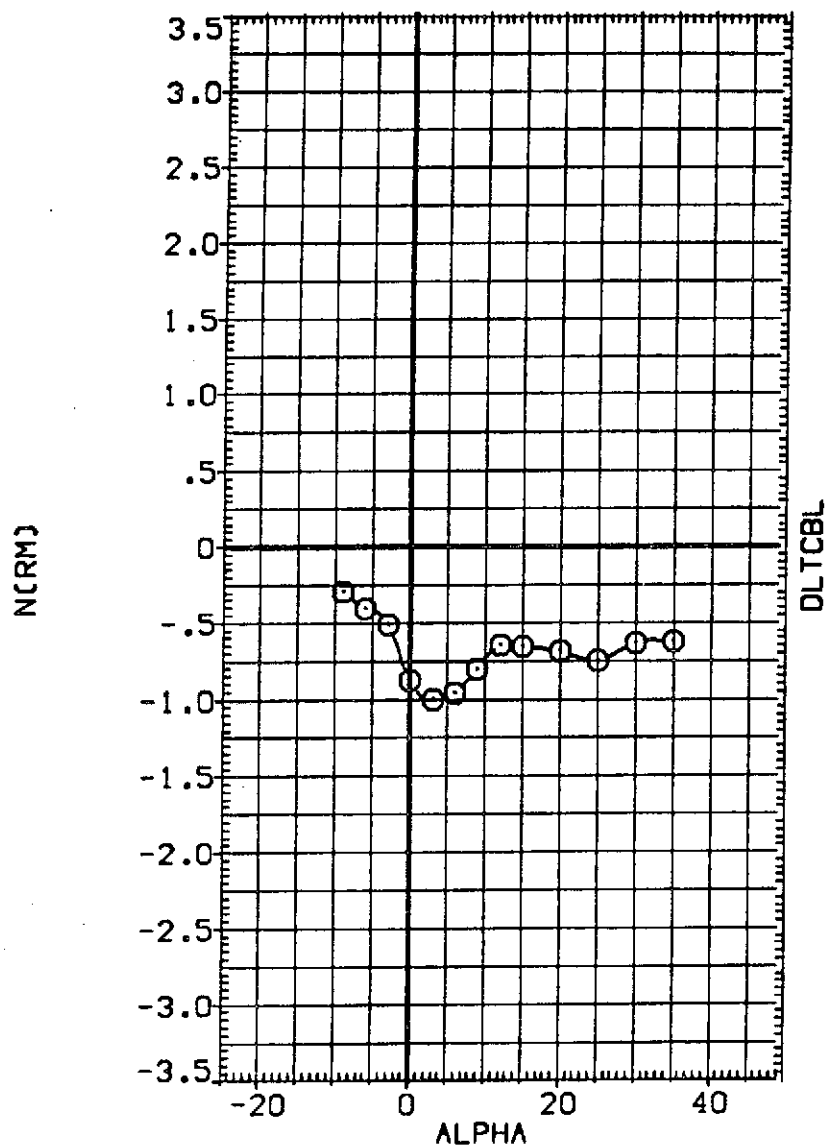


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLCOS) ○ 0A82 CFHT113 MODEL 32-0 GR8 V/N49N52 (AIR)

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| | | | | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

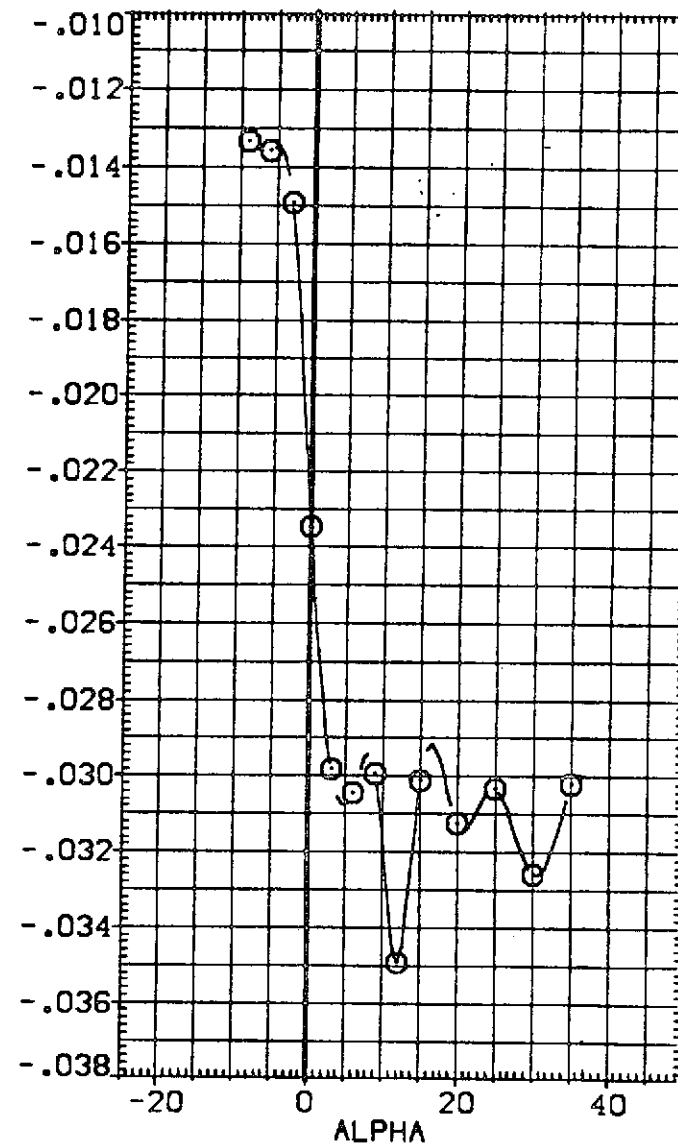
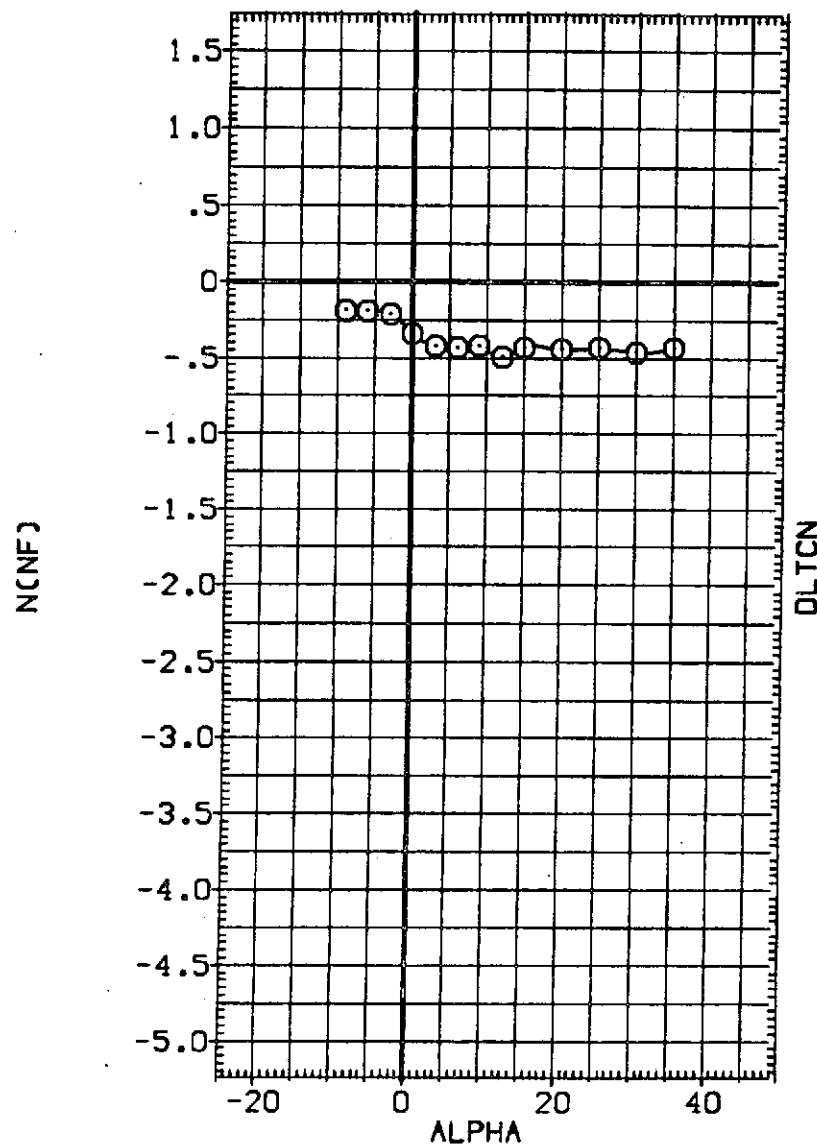


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH

(A) MACH = 10.30

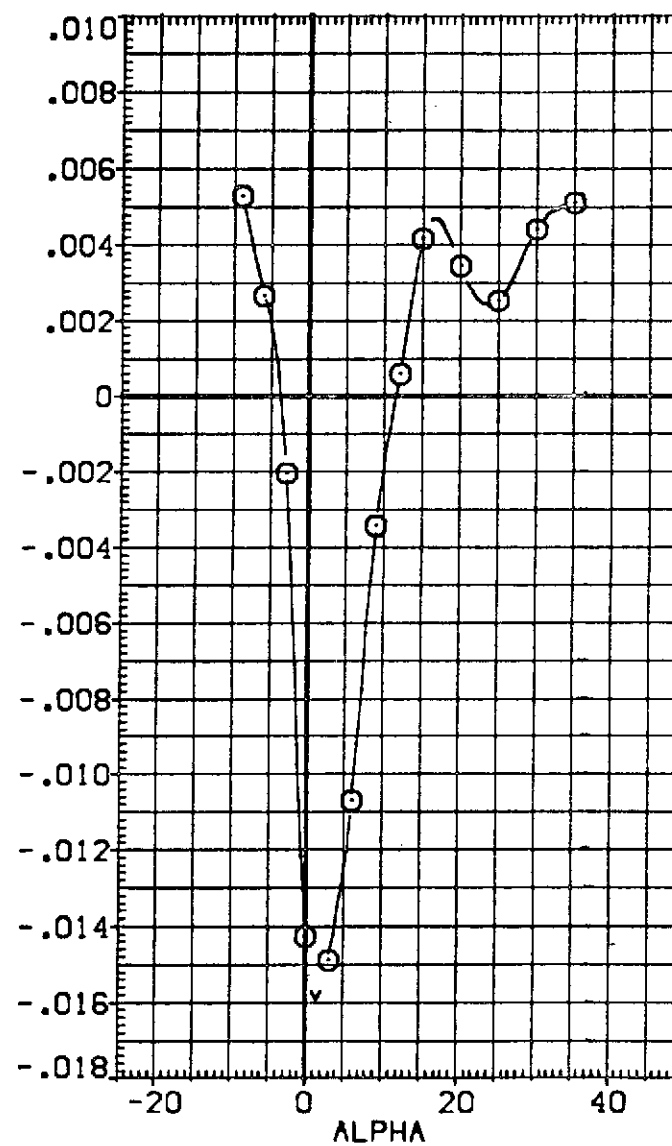
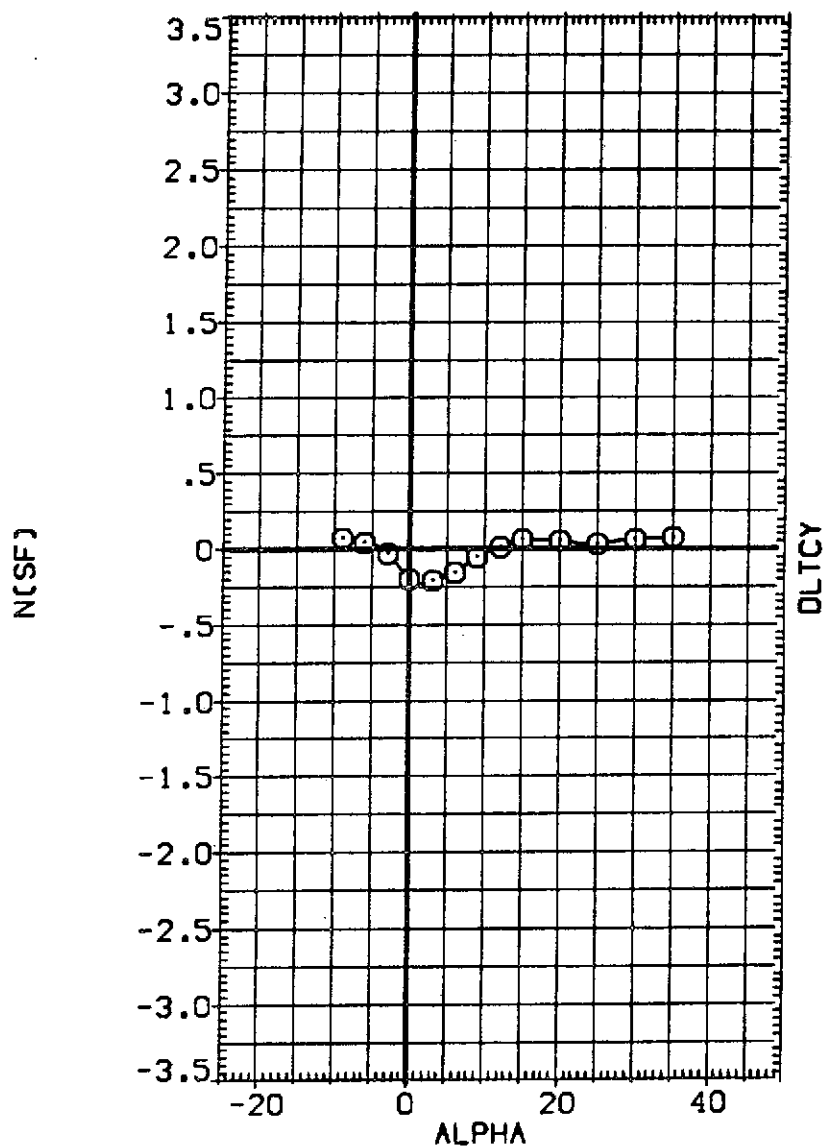


FIG. 12 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL002) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL004) | QAB2 CFHT113 MODEL 32-0 ORB V/N49N52 [AIR] | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | | | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

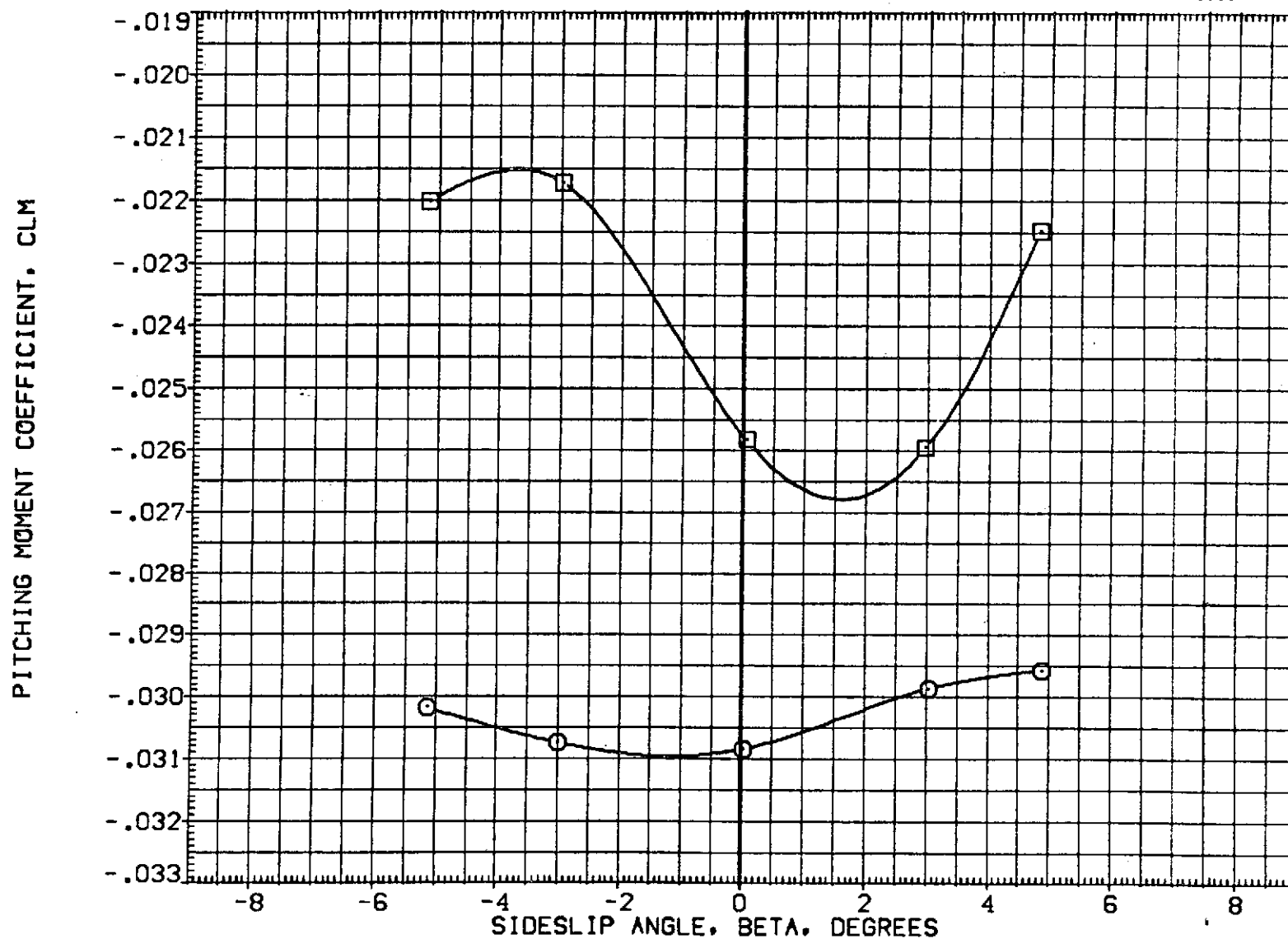


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| (RHL02) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL004) | 0A82 CFHT113 MODEL 32-0 ORB V/N49N52 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.0100 IN. |
| | | | | | | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 IN. |

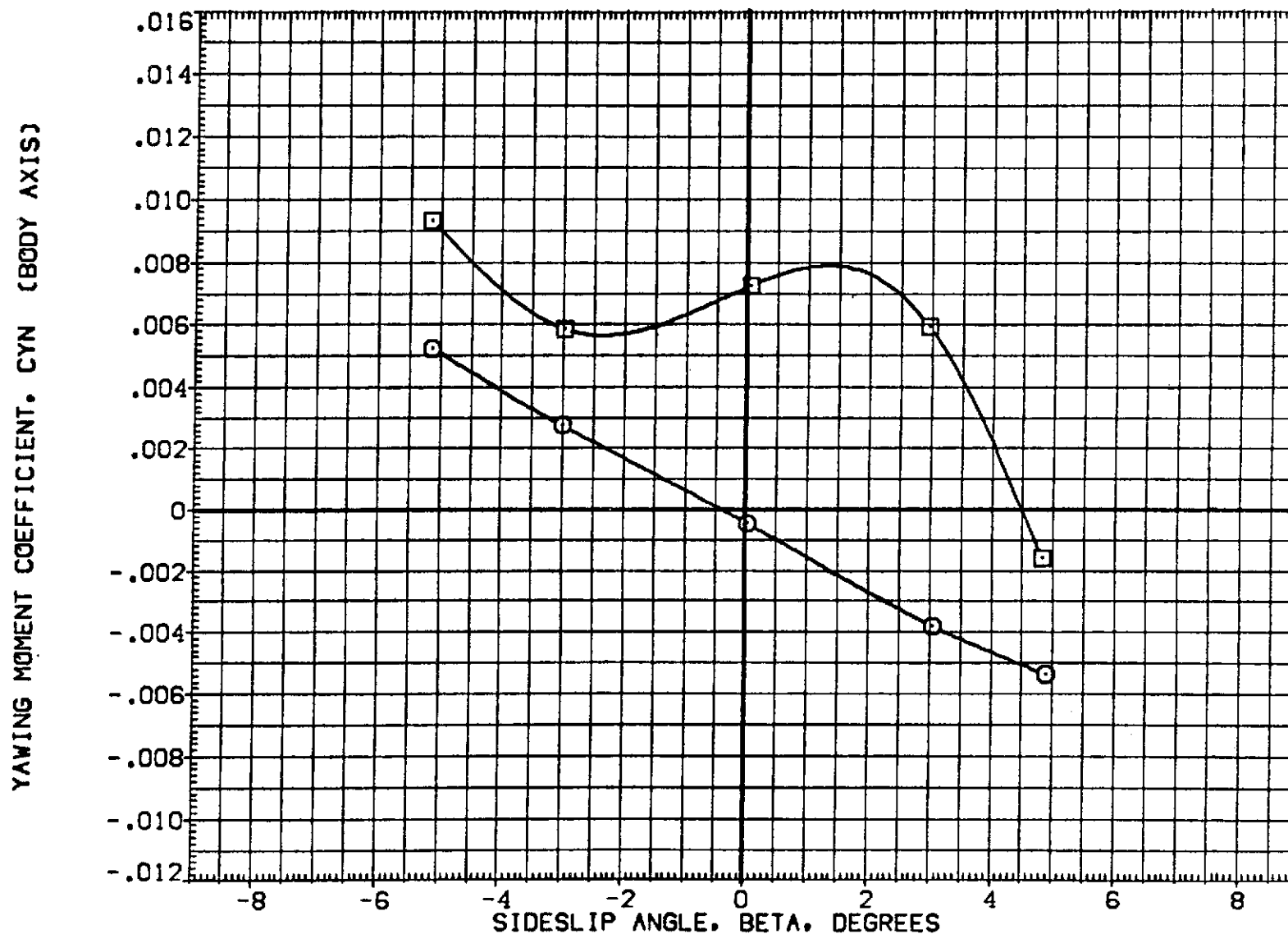


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION

[RHL002] □ QAB2 CFHT113 MODEL 32-0 ORB V/N84 RCS OFF
 [RHL004] □ QAB2 CFHT113 MODEL 32-0 ORB V/N49N52 [AIR]

Q(PSF) PCRCs TCRCs T/QA
 150.000 .000 .000 .000
 150.000 155.000 69.000 47.500

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.9100 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0100

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

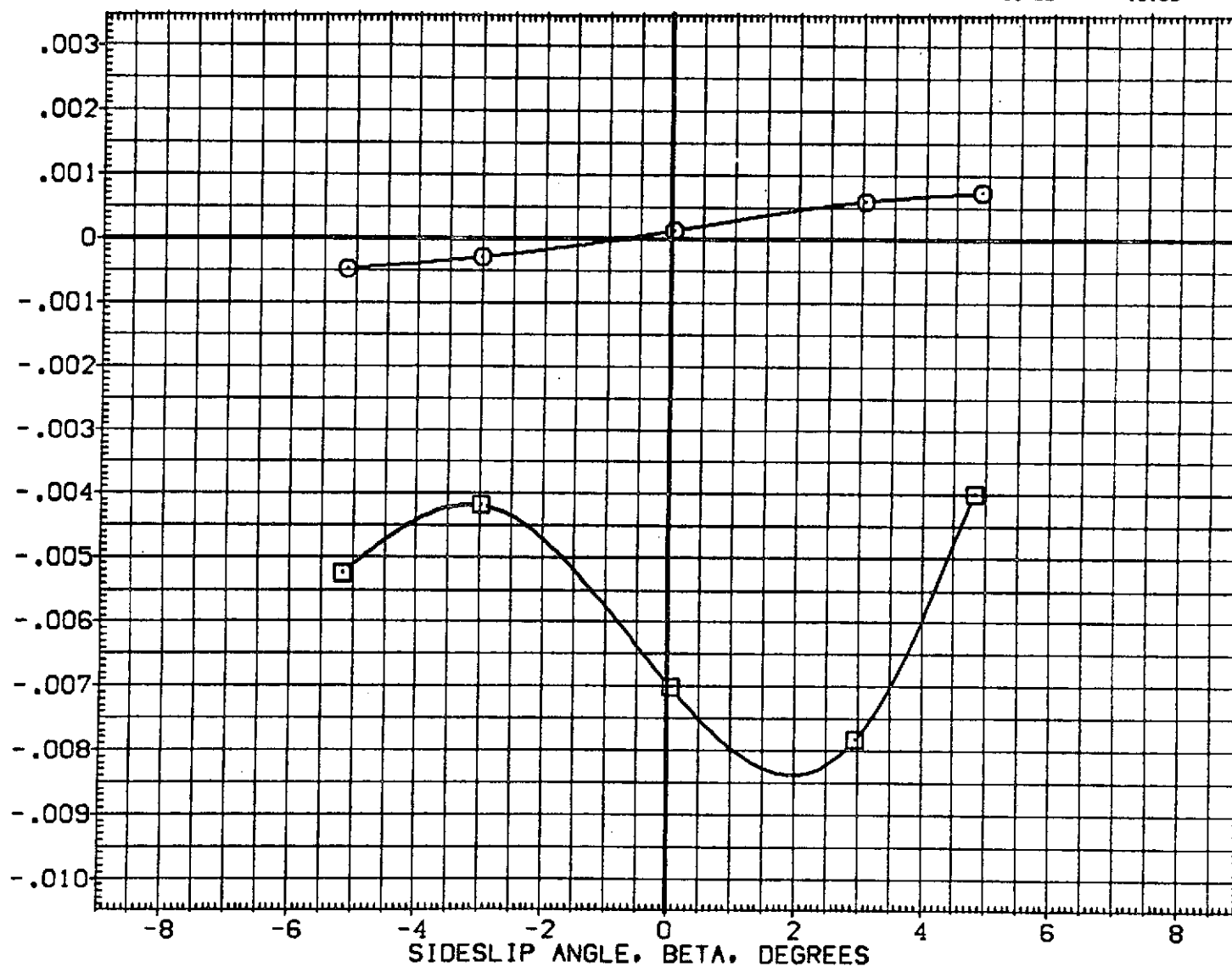


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.33

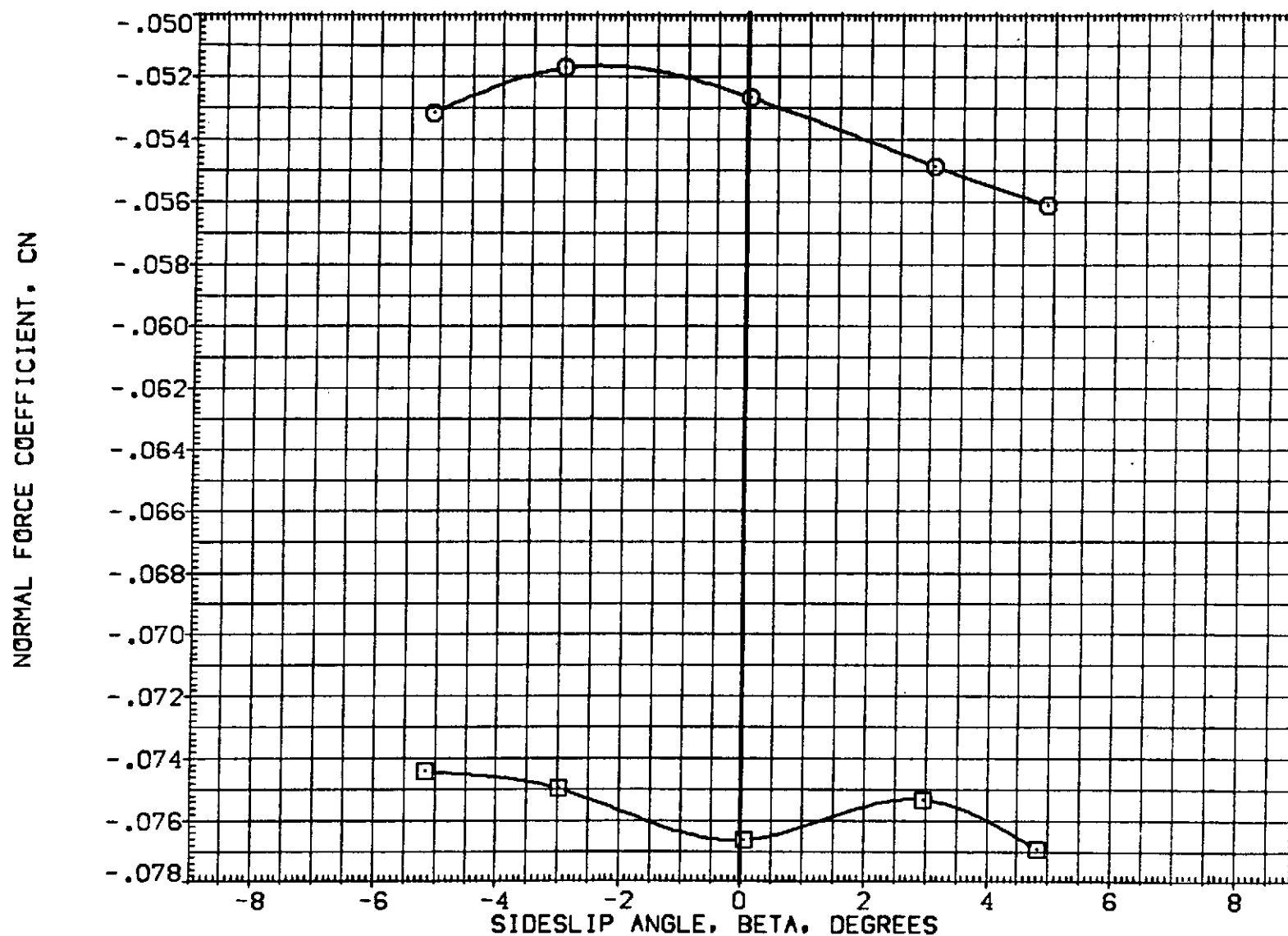


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | Y/QA | REFERENCE INFORMATION | |
|-----------------|--|---------|---------|--------|--------|-----------------------|------------------|
| [RHL02] | 0A82 CFHT113 MODEL 32-0 CRB V/N84 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHL004] | 0A82 CFHT113 MODEL 32-0 CRB V/N49N52 (AIR) | 150.000 | 156.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | | | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

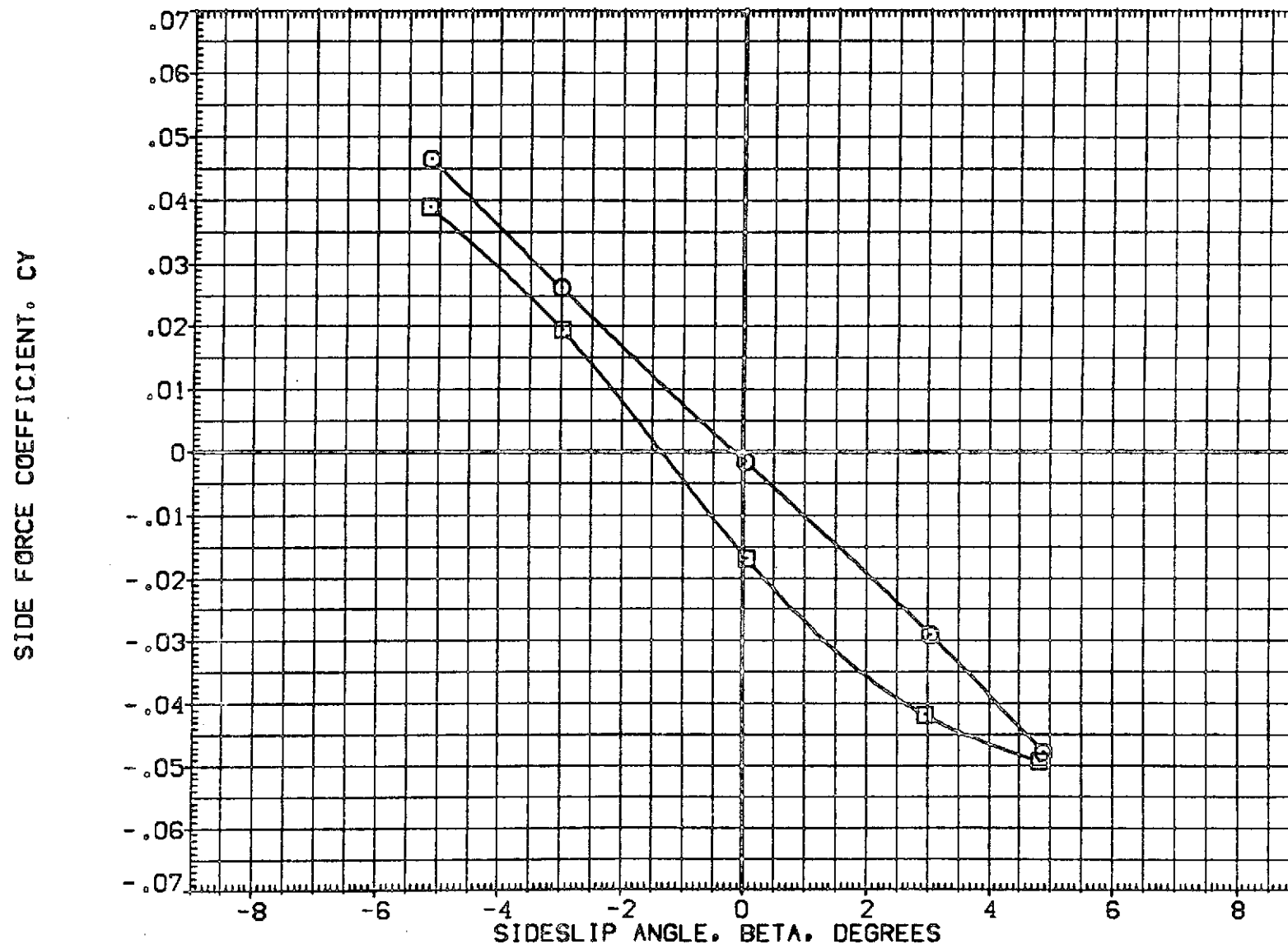


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP
(A)MACH. = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | FORCS | TORCS | T/QA | REFERENCE INFORMATION |
|-----------------|--|---------|---------|--------|--------|-----------------------|
| (RMLF02) | 0A02 CFHT113 MODEL 32-0 CRB V/N34 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2890.0000 SQ.FT. |
| (RML004) | 0A02 CFHT113 MODEL 32-0 CRB V/N49N52 (AIR) | 150.000 | 155.000 | 69.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

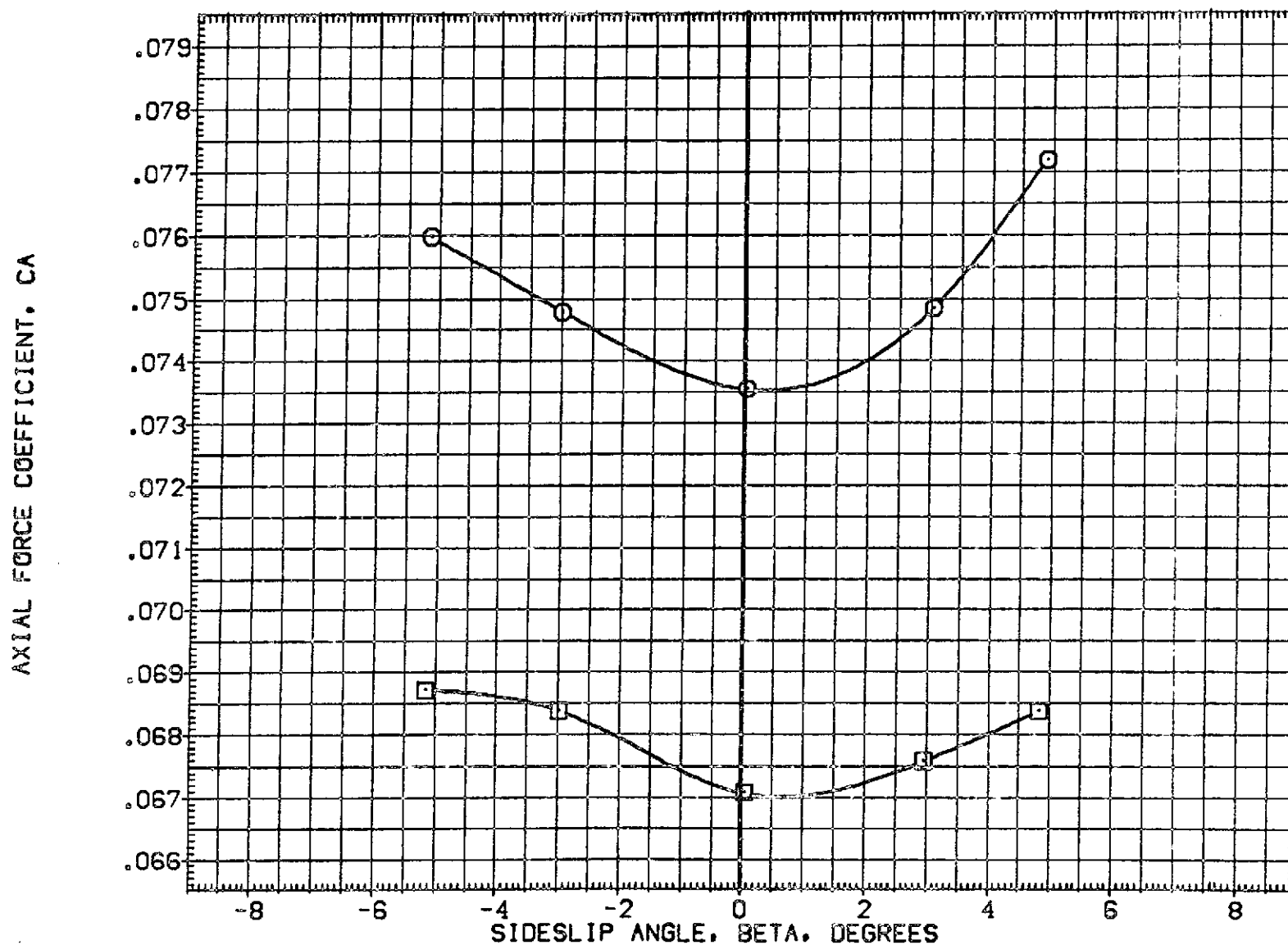


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP
 (A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC04) ○ CAB2 CFHT113 MODEL 32-0 CRB W/N49N52 (AIR)

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|--------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF 2690.0000 | 50.FT. |
| | | | | LREF 474.8100 | IN. |
| | | | | BREF 936.6800 | IN. |
| | | | | XMRP 1076.7000 | IN. |
| | | | | YMRP .0000 | IN. |
| | | | | ZMRP 375.0000 | IN. |
| | | | | SCALE .0100 | |

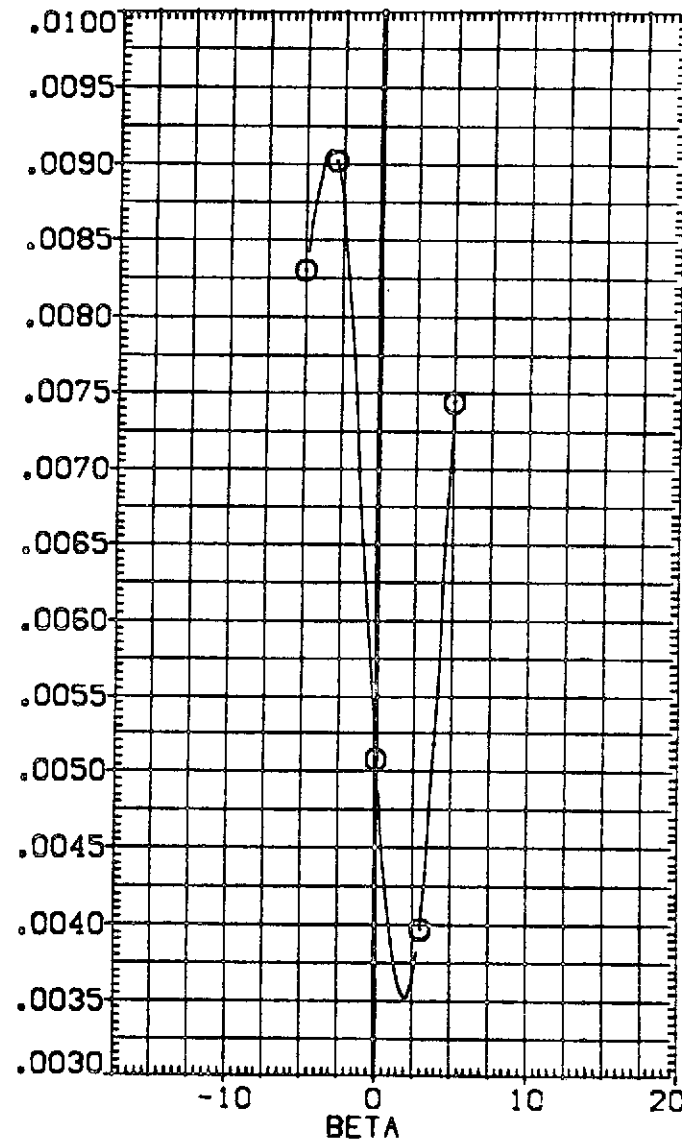
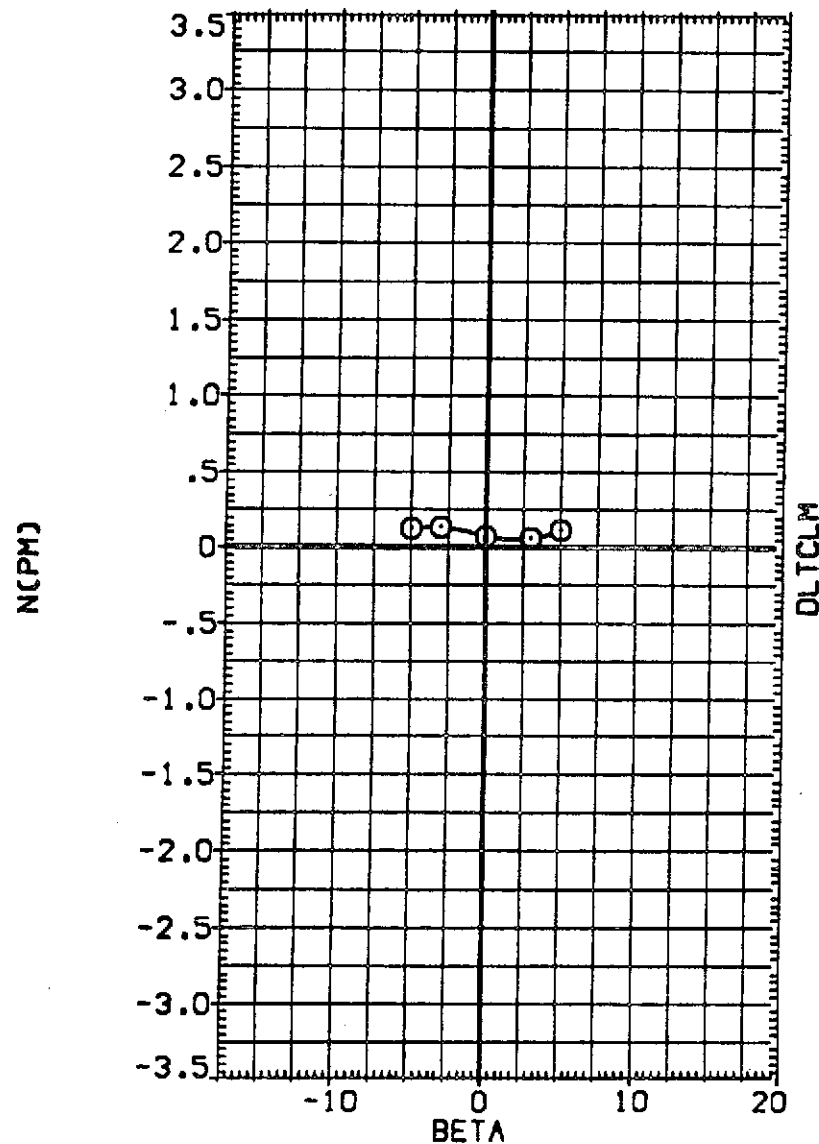


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP

(A) MACH = 10.30

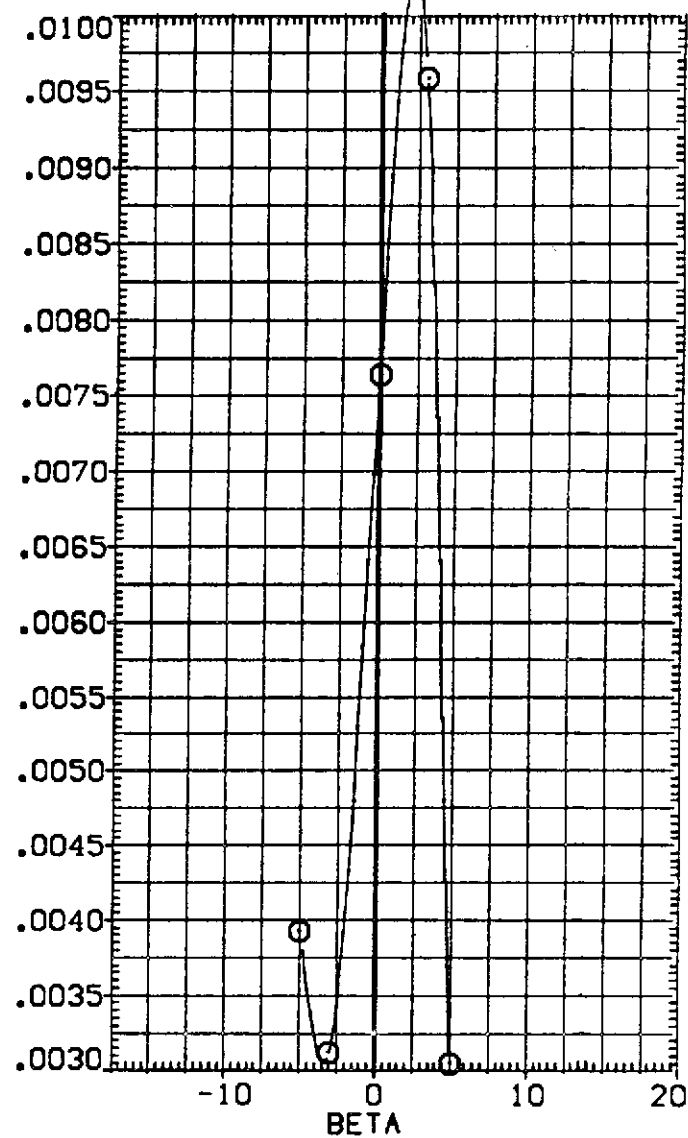
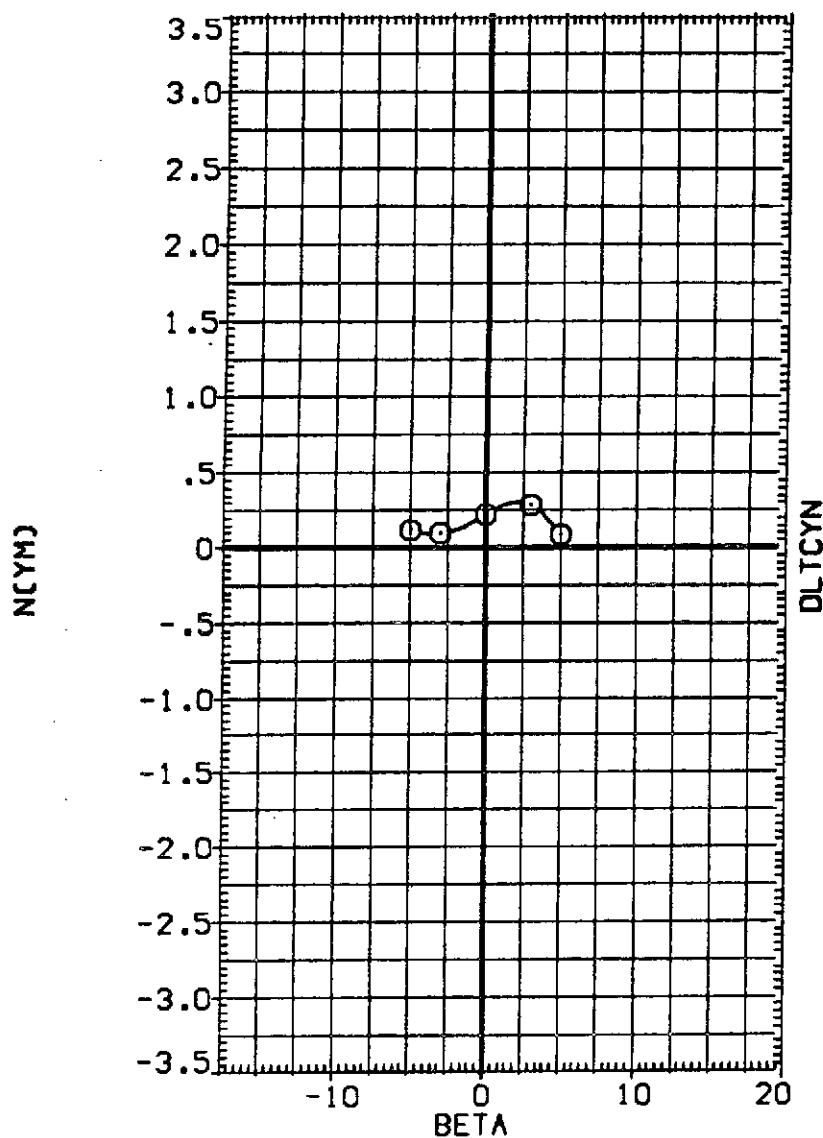


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC04) ○ 0A82 CFHT113 MODEL 32-0 ORB W/N49N52 (AIR)

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| | | | | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

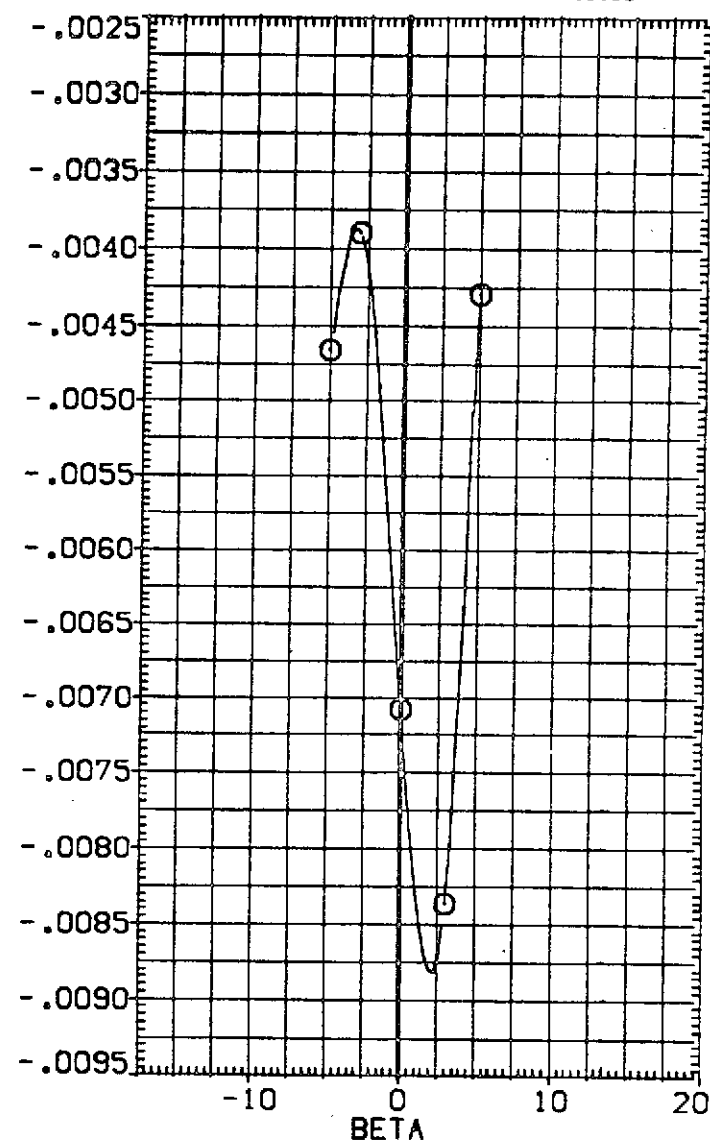
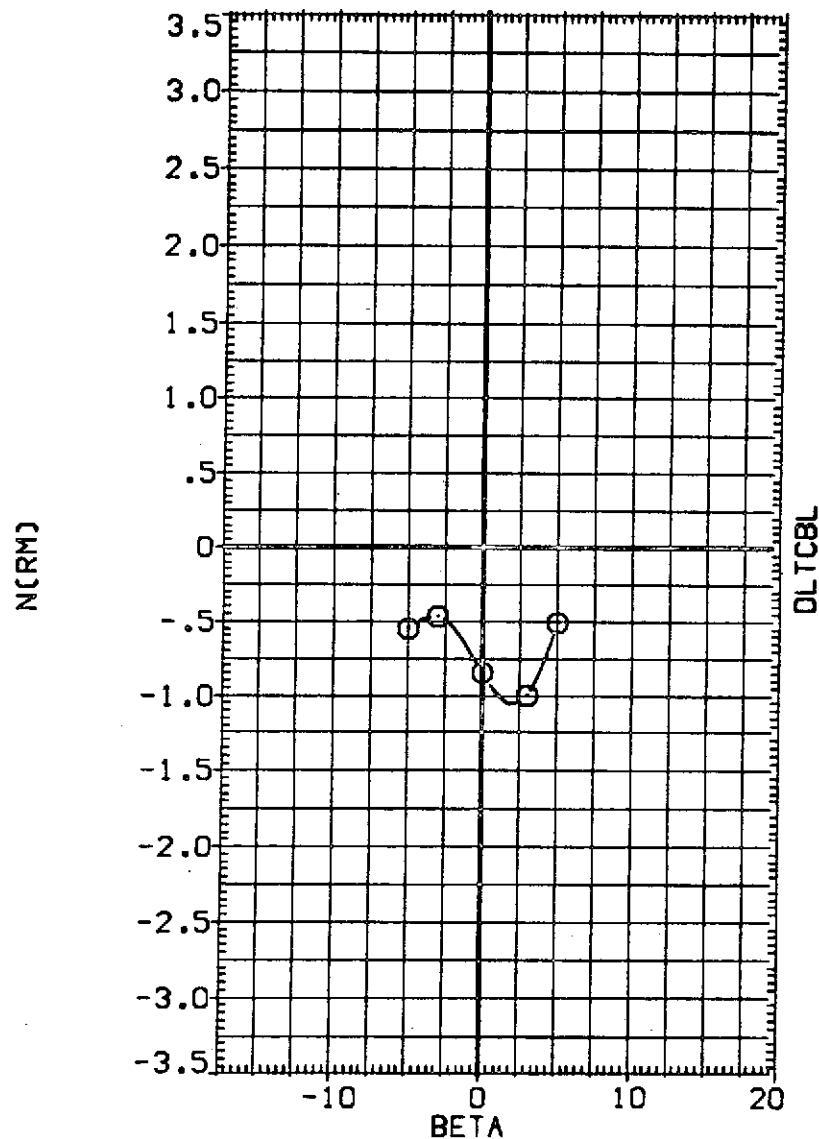


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP
 (A) MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC04) ○ GAB2 CFHT113 MODEL 32-0 OR8 V/N49N52 (AIR)

| Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|---------|
| 150.000 | 155.000 | 69.000 | 47.500 | SREF 2690.0000 | 50. FT. |
| | | | | LREF 474.8100 | IN. |
| | | | | BREF 936.6800 | IN. |
| | | | | XMRP 1076.7000 | IN. |
| | | | | YMRP .0000 | IN. |
| | | | | ZMRP 375.0000 | IN. |
| | | | | SCALE .0100 | |

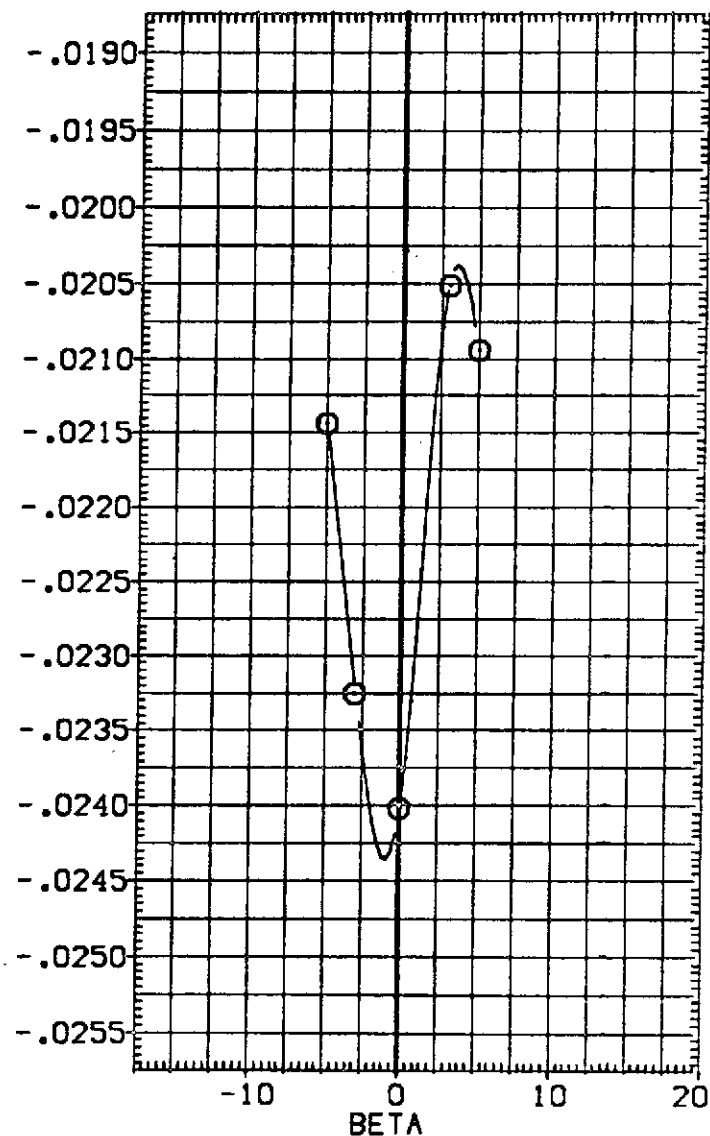
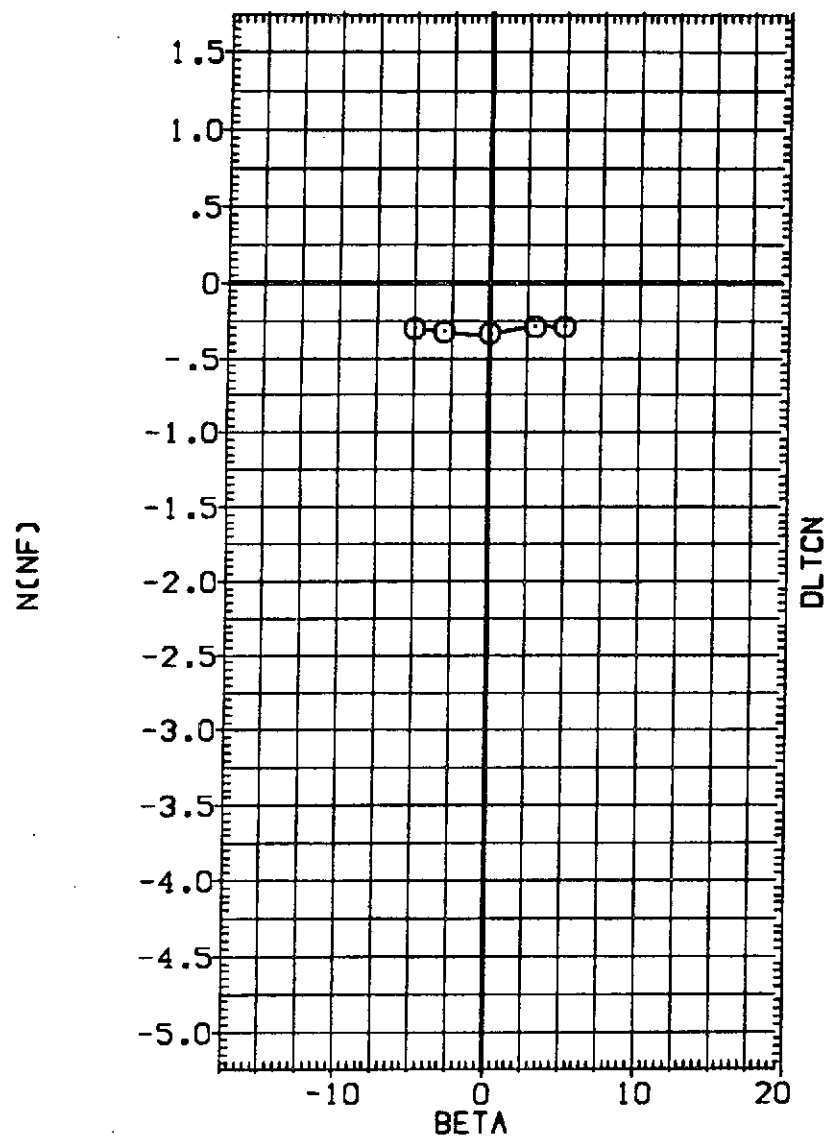


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP

(A) MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC04) ○ OAS2 CFHT113 MODEL 32-0 ORB V/N49N52 (AIR)

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| | | | | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

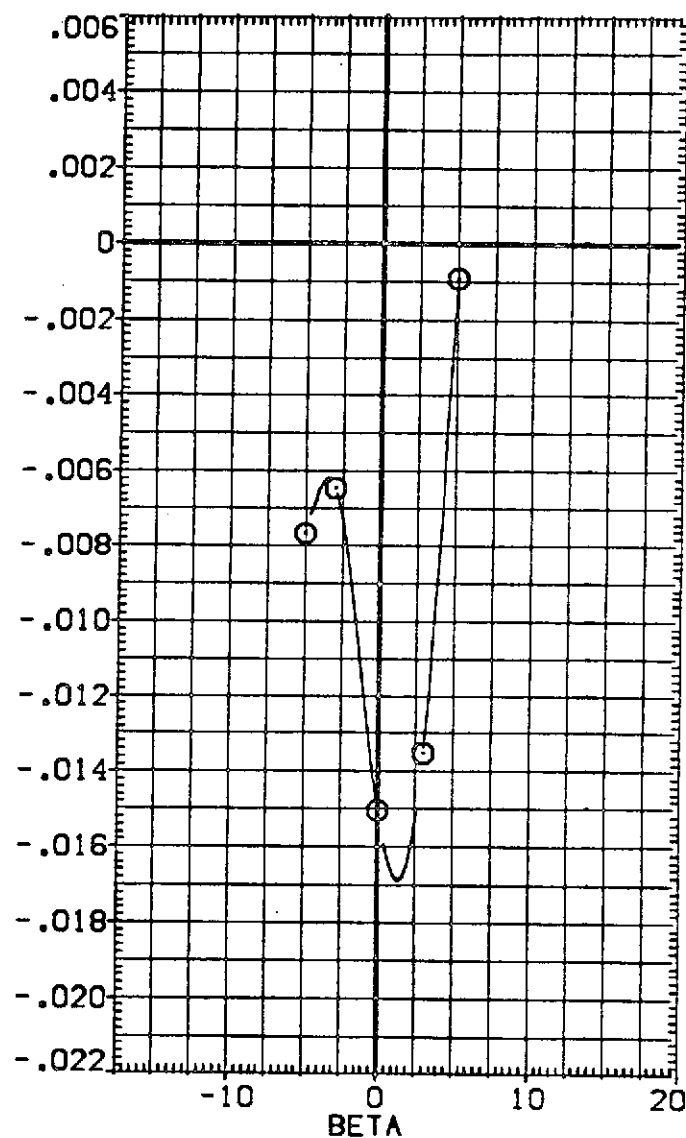
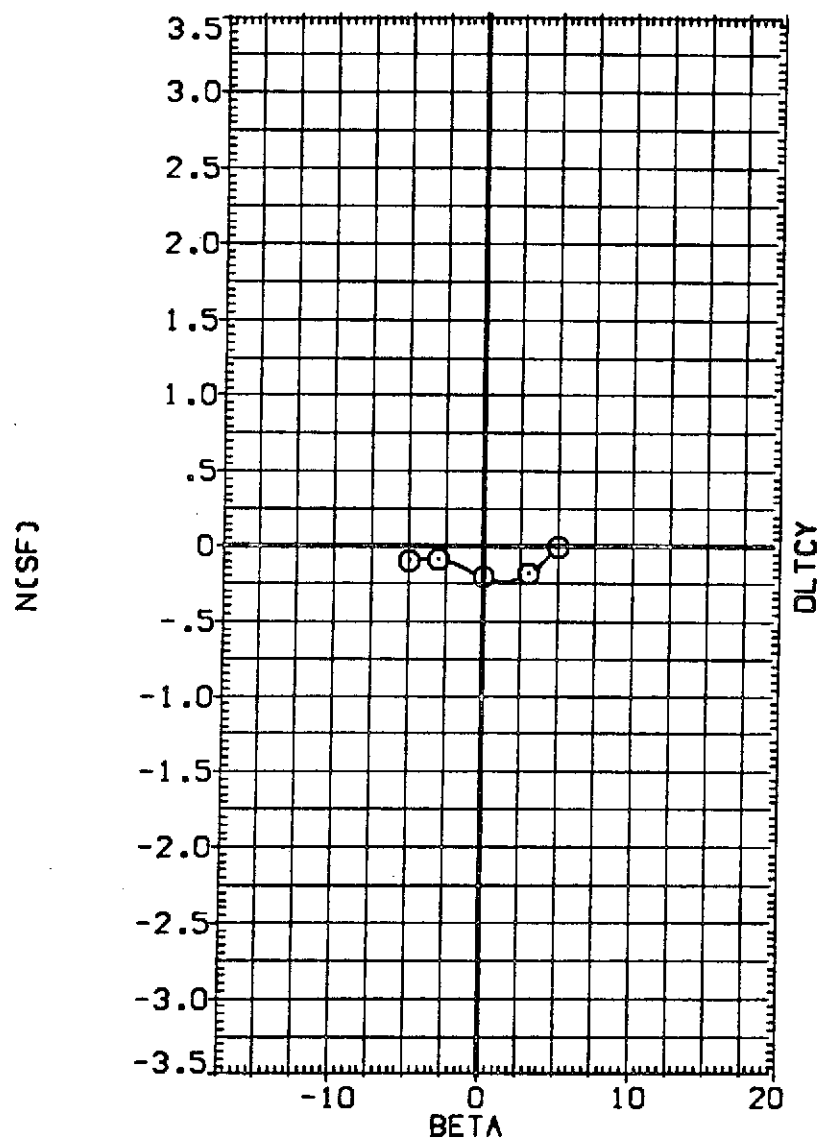


FIG. 13 EFFECT OF N49N52 USING AIR ON AERO CHARACT IN SIDESLIP
 (A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|
| [RHL04] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [RHL013] | QAB2 CFHT113 MODEL 32-0 ORB V/N84 | 150.000 | 161.000 | 70.000 | 47.500 | LREF 474.0100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

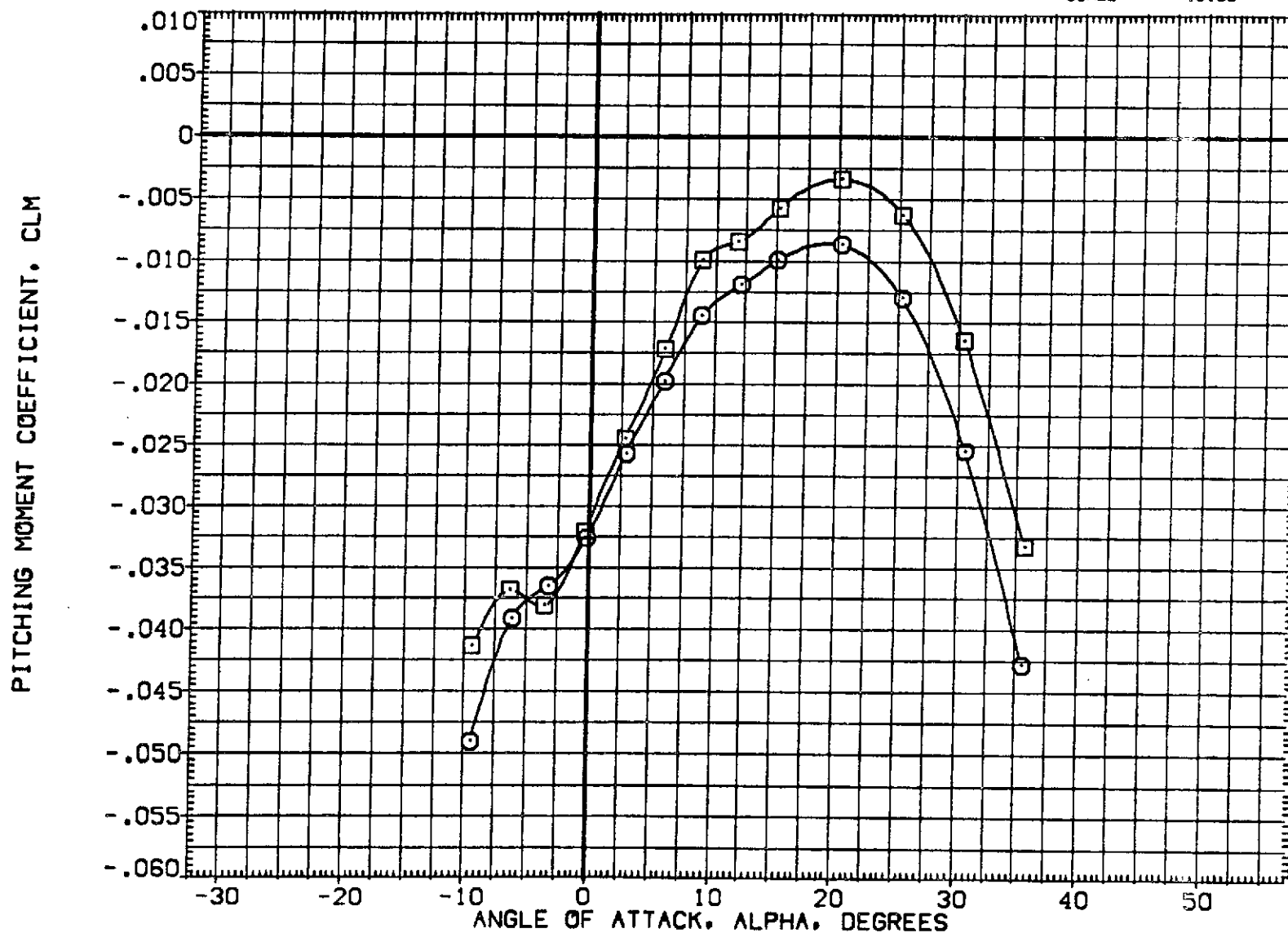


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | D(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLFO4) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL013) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 (AIR) | 150.000 | 161.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

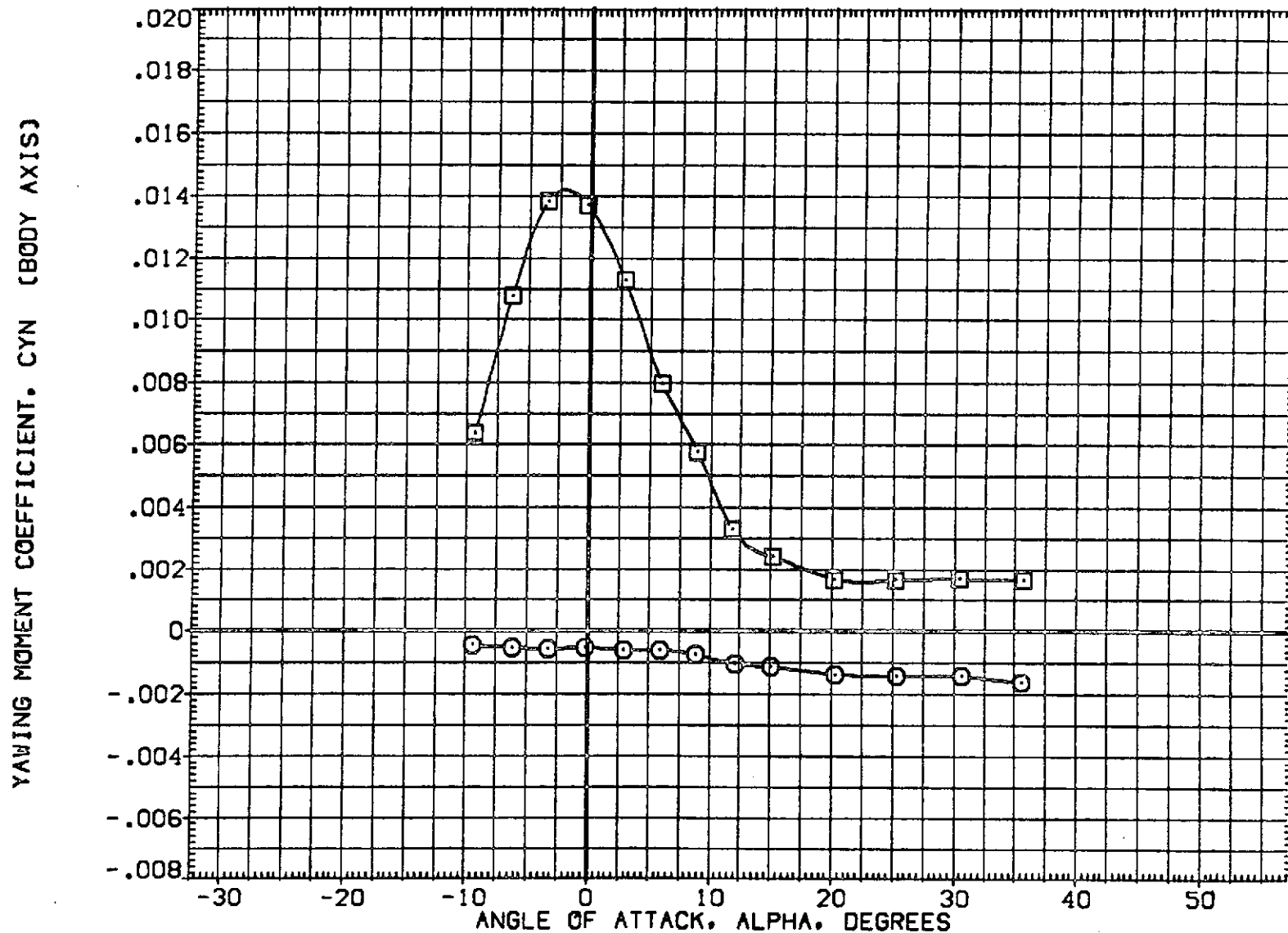


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL013) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | 150.000 | 161.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | | | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

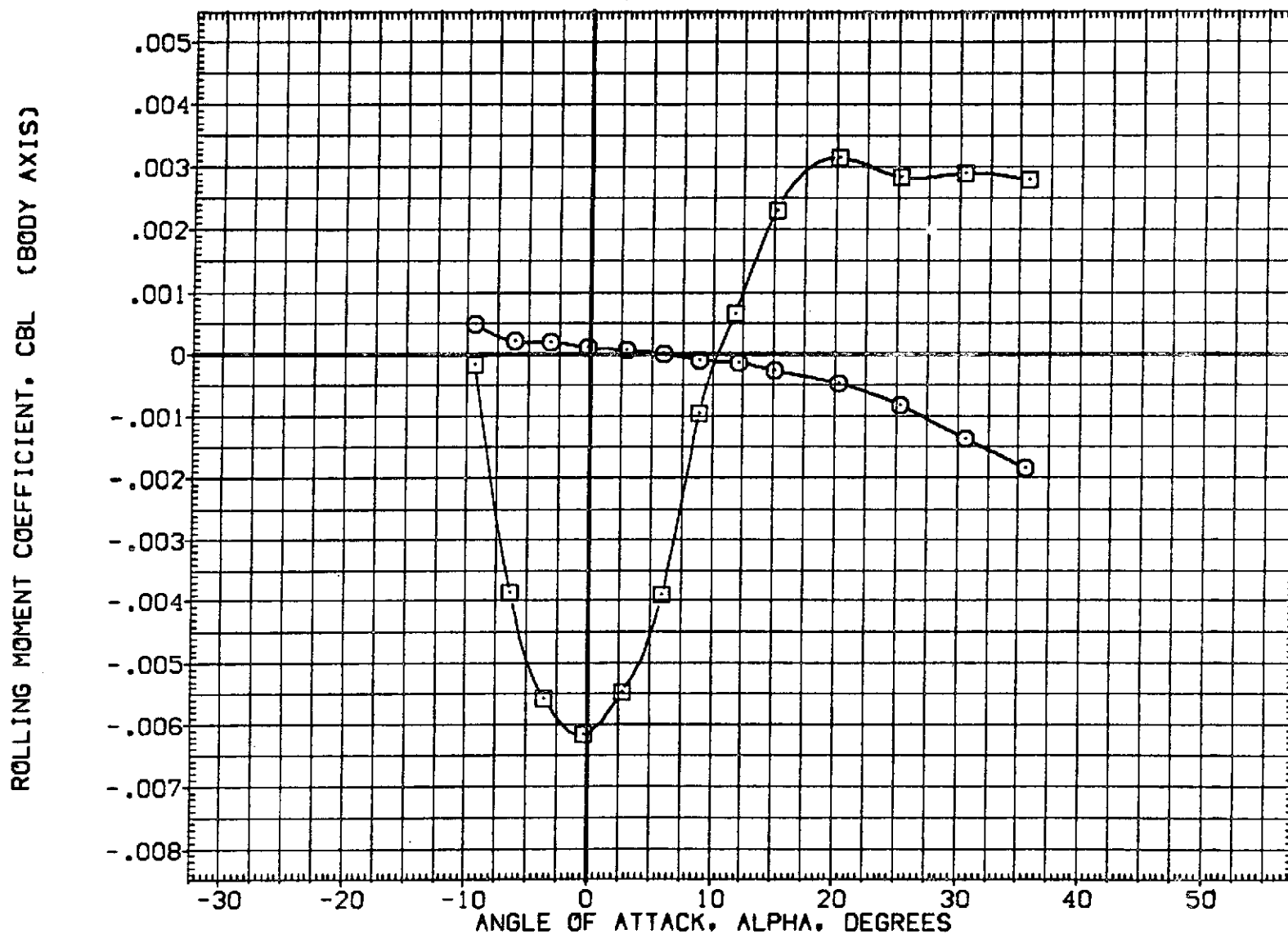


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RHL04) \square 0A82 CFHT113 MODEL 32-0 OR8 V/N85 RCS OFF
 (RHL013) \square 0A82 CFHT113 MODEL 32-0 OR8 V/N84 (AIR)

Q(PSF) PORCS TCRCs T/QA
 150.000 .000 .000 .000
 150.000 161.000 70.000 47.500

REFERENCE INFORMATION
 SREF 2690.0000 SQ.FT.
 LREF 474.8100 IN.
 BREF 936.6800 IN.
 XMRP 1076.7000 IN.
 YMRP .0000 IN.
 ZMRP 375.0000 IN.
 SCALE .0100

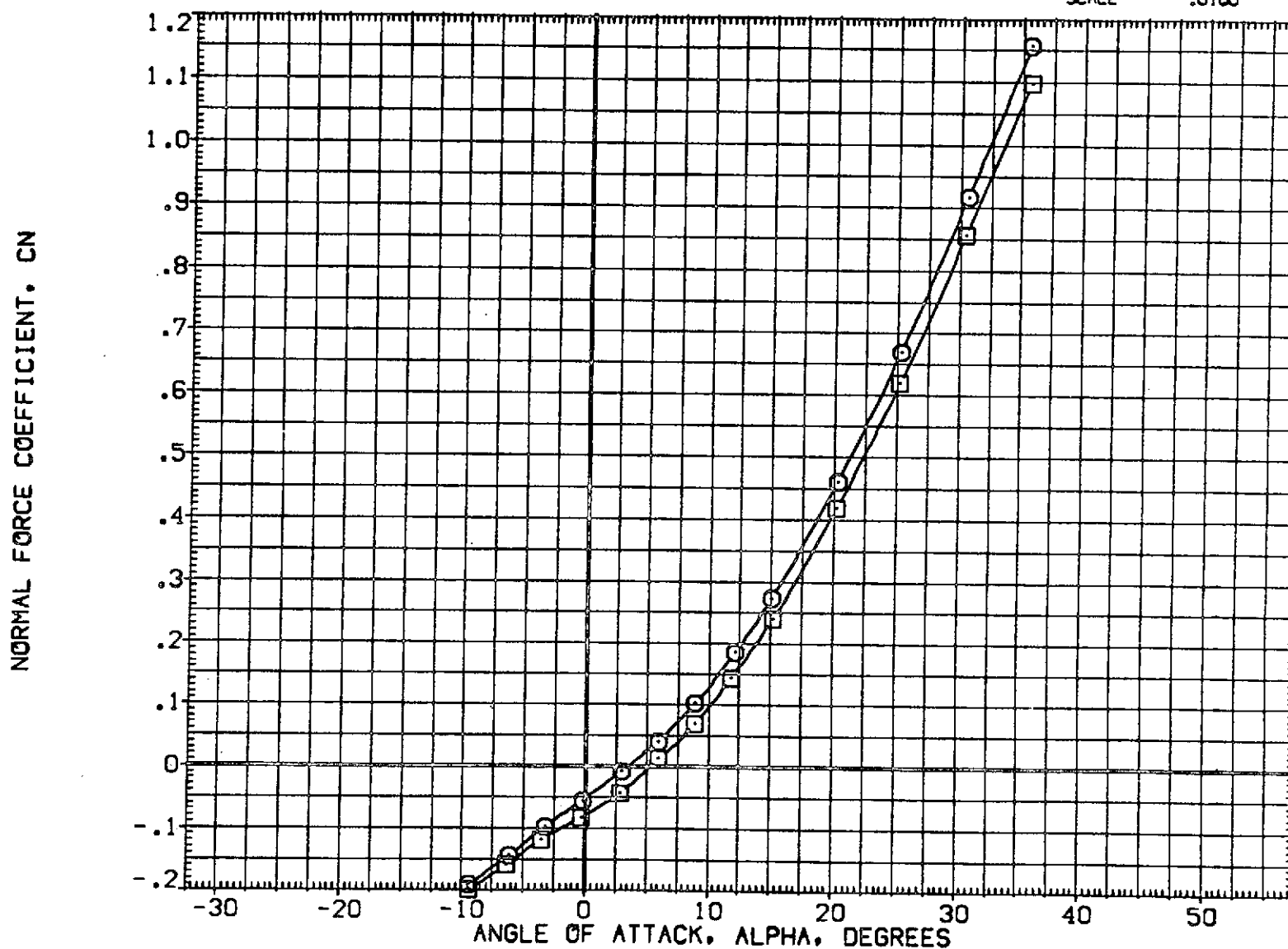


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | 150.000 | .000 | .000 | .000 | SREF 2680.0000 SQ.FT. |
| (RHL013) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | 150.000 | 161.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 932.6800 IN. |
| | | | | | | XMRF 1076.7000 IN. |
| | | | | | | YMRF .0000 IN. |
| | | | | | | ZMRF 375.0000 IN. |
| | | | | | | SCALE .0100 |

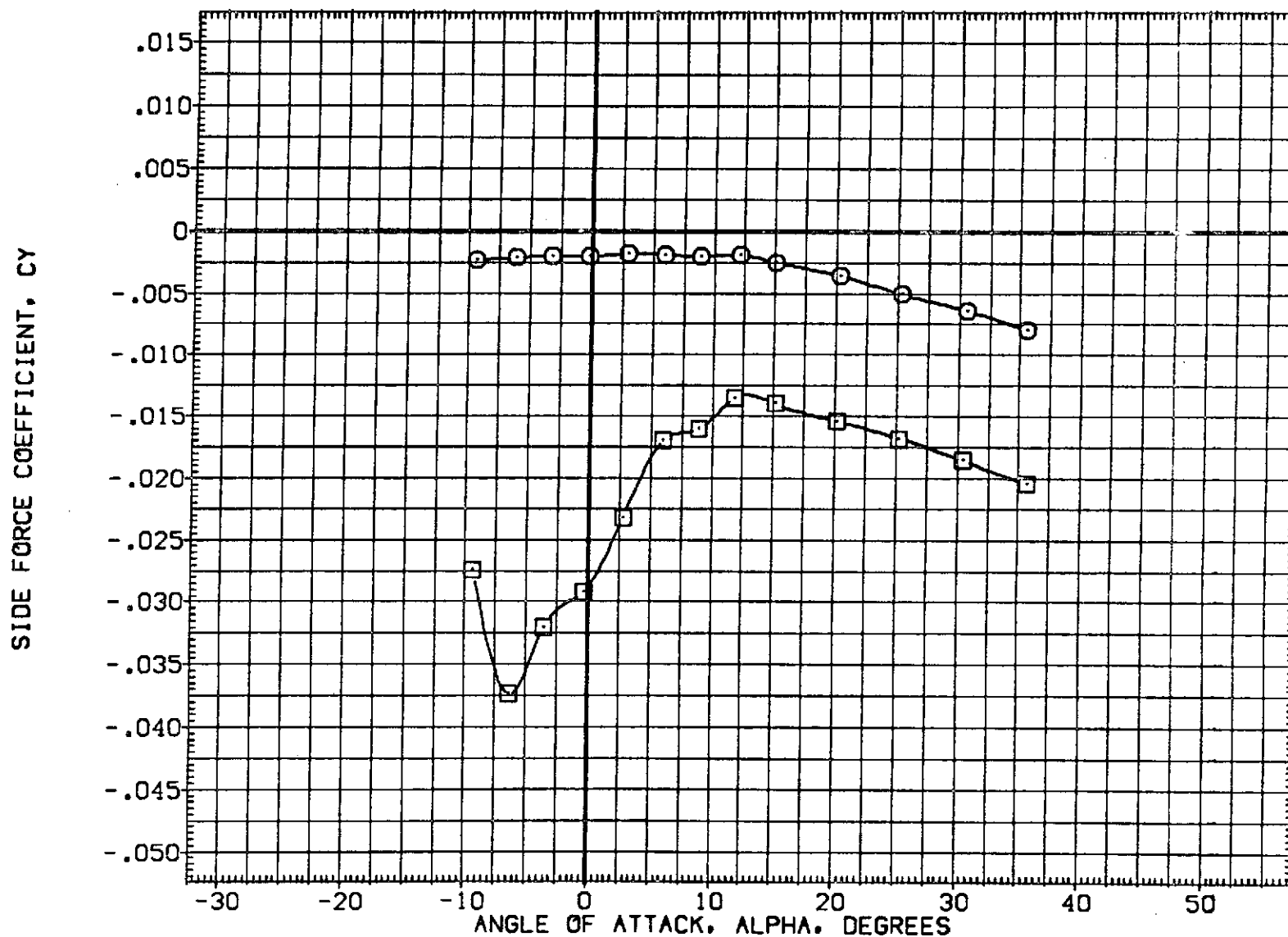


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|
| (RHLF04) | 0AB2 CFHT113 MODEL 32-0 OR8 V/N85 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL013) | 0AB2 CFHT113 MODEL 32-0 OR8 V/N84 | 150.000 | 161.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRF 1076.7000 IN. |
| | | | | | | YMRF .0000 IN. |
| | | | | | | ZMRF 375.0000 IN. |
| | | | | | | SCALE .0100 |

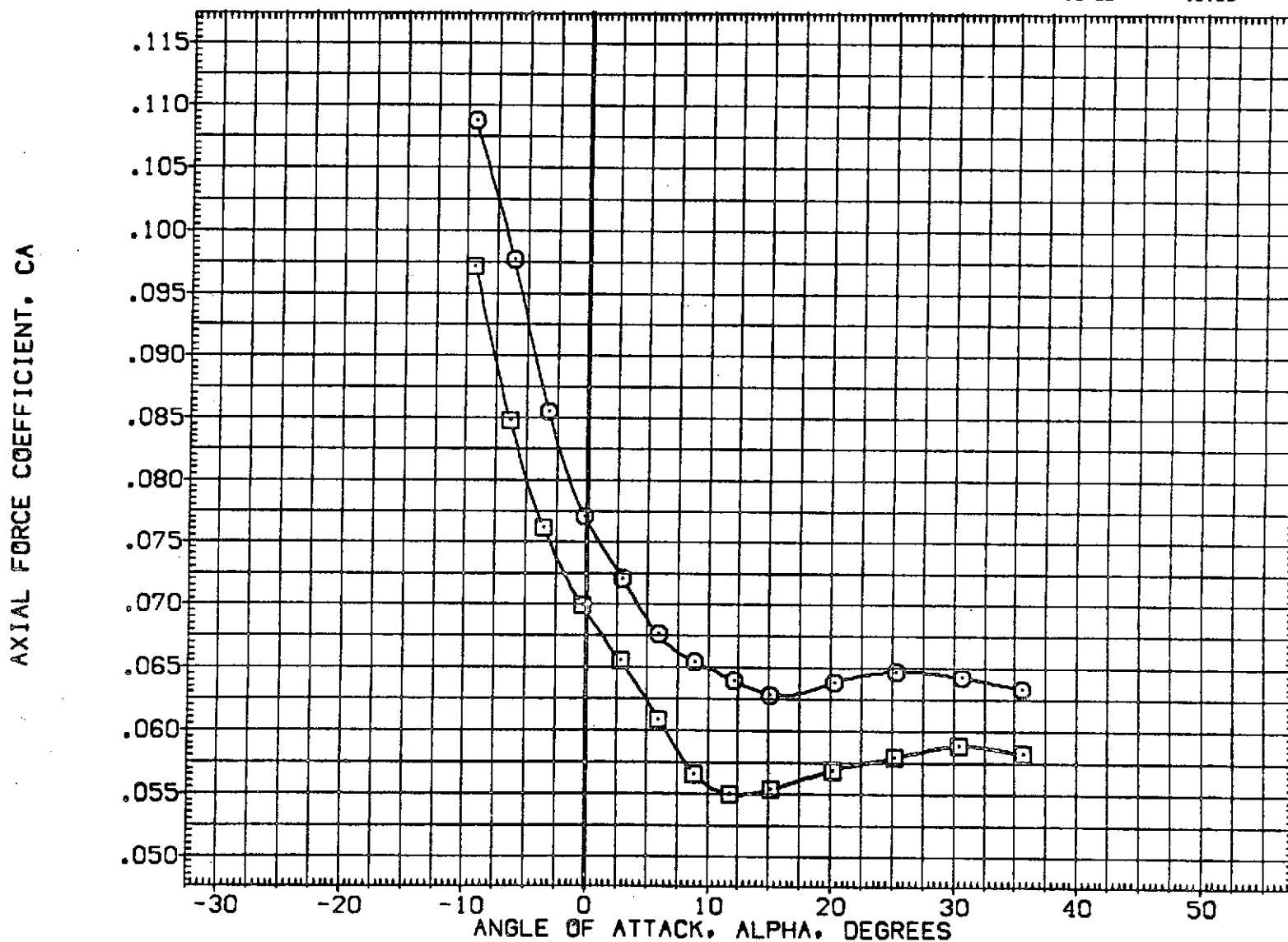


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

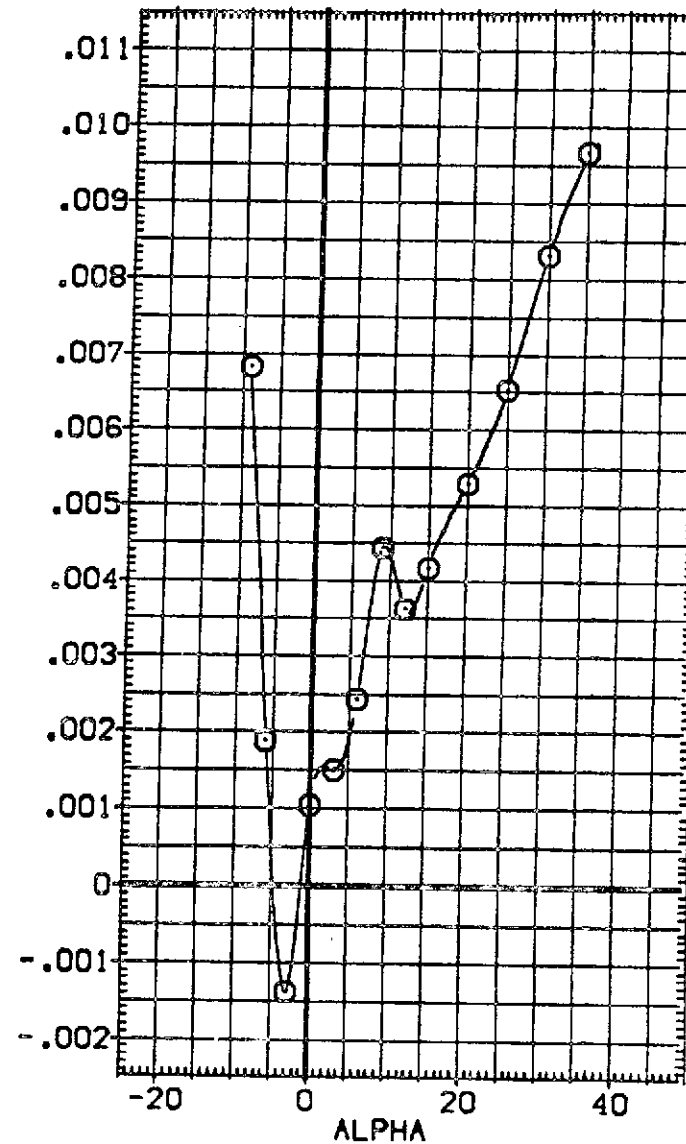
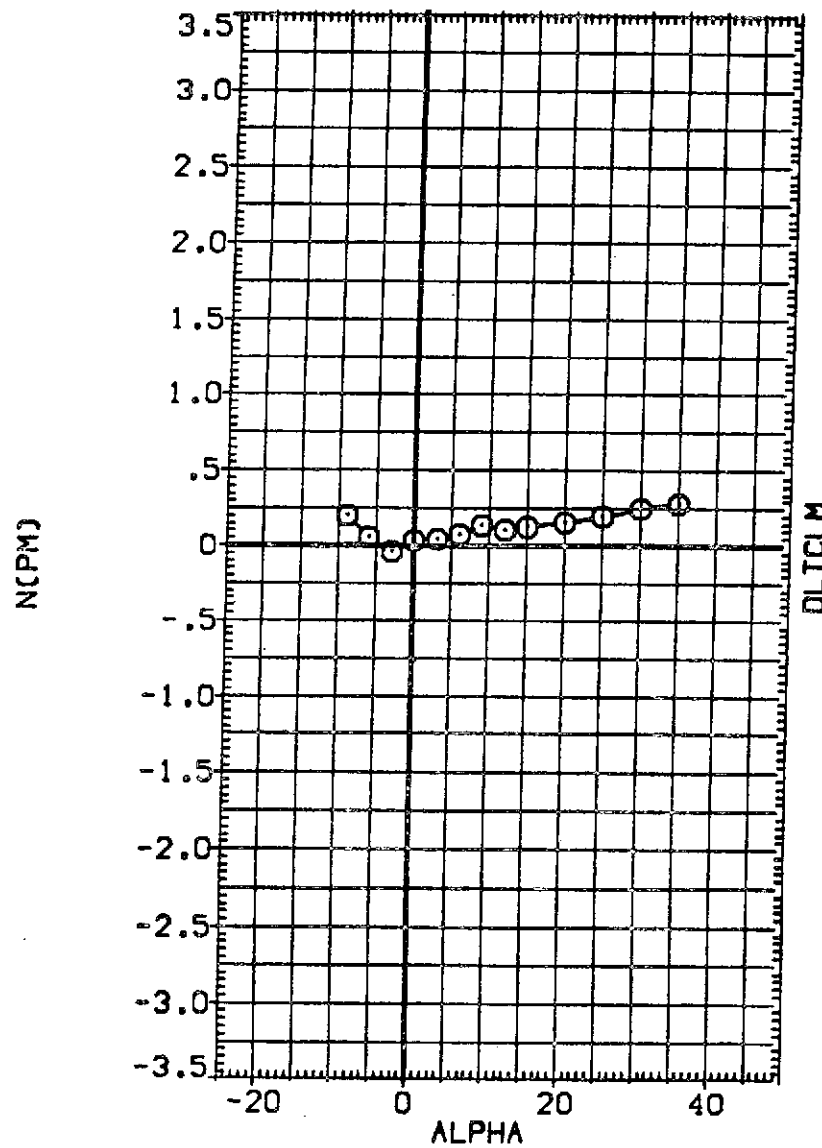


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH
 (A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC13) ○ CAB2 CFHT113 MODEL 32-0 ORB V/N84 (AIR)

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|--------|
| 150.000 | 161.000 | 70.000 | 47.500 | SREF 2690.0000 | SQ.FT. |
| | | | | LREF 474.8100 | IN. |
| | | | | BREF 936.6800 | IN. |
| | | | | XMRP 1076.7000 | IN. |
| | | | | YMRP .0000 | IN. |
| | | | | ZMRP 375.0000 | IN. |
| | | | | SCALE .0100 | |

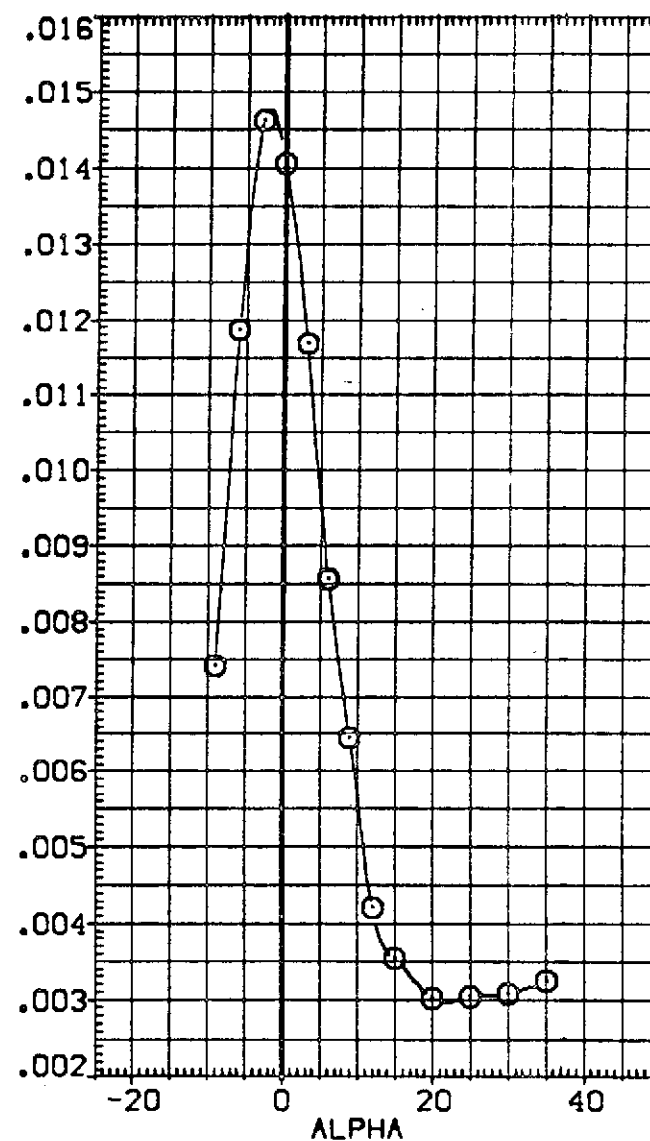
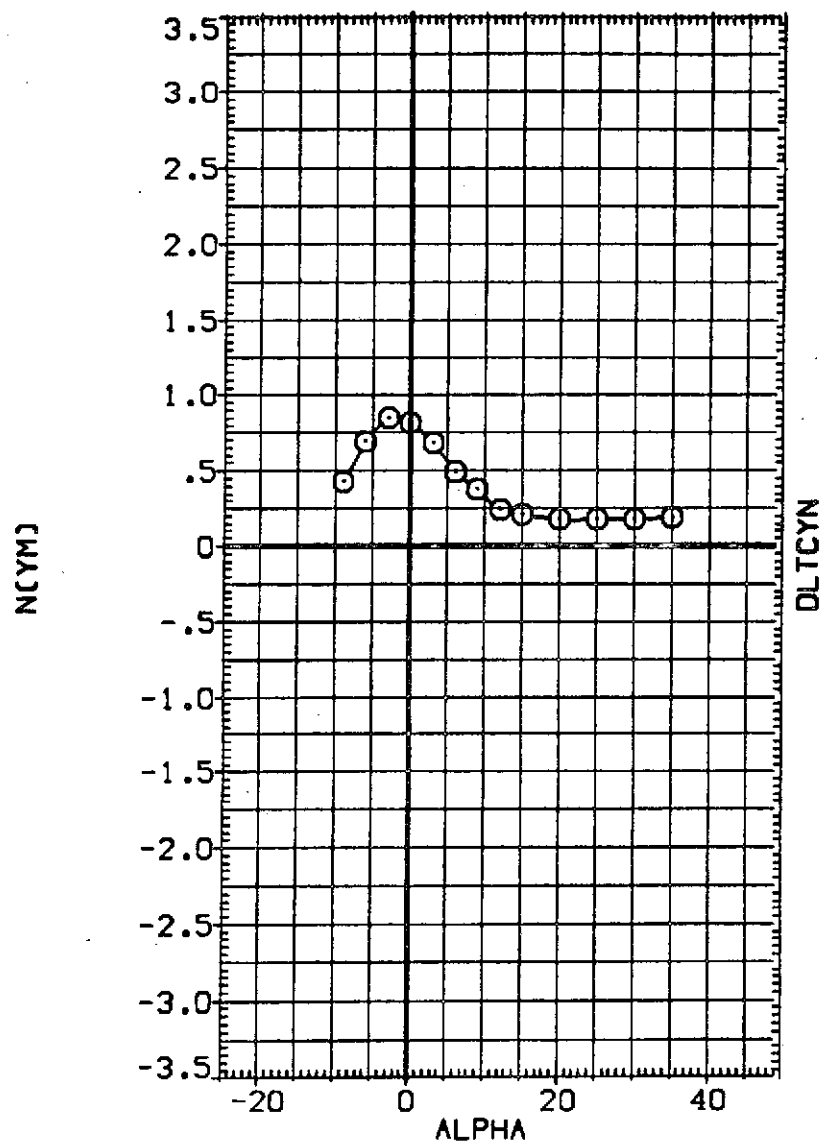


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH
 (A)MACH = 10.30

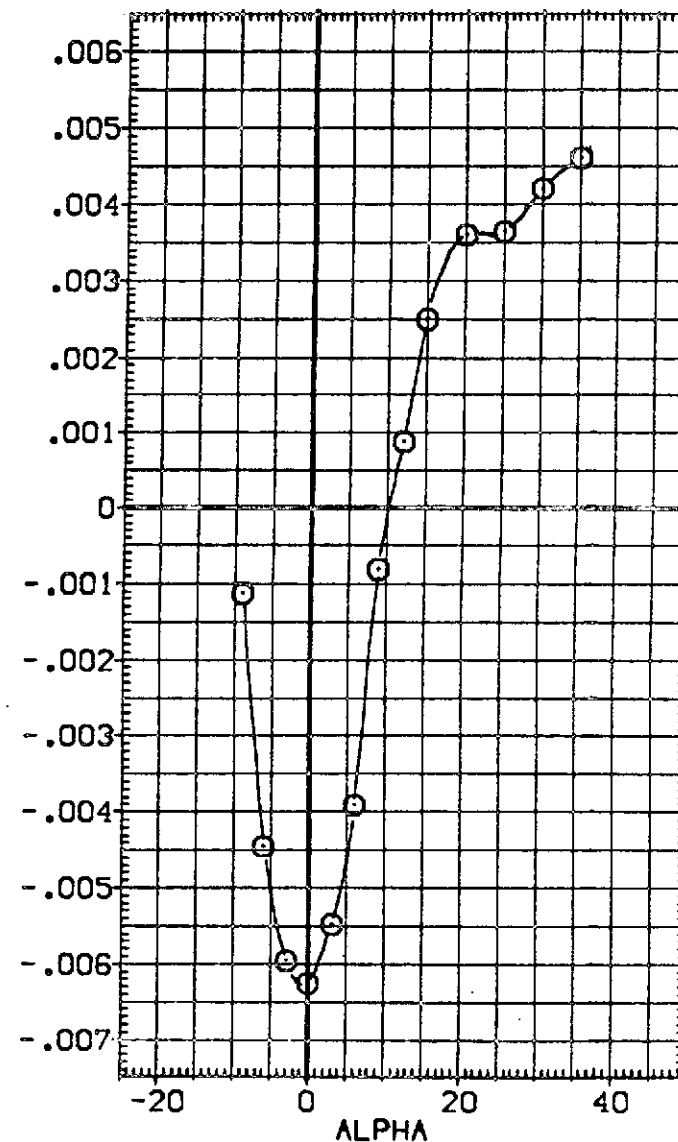
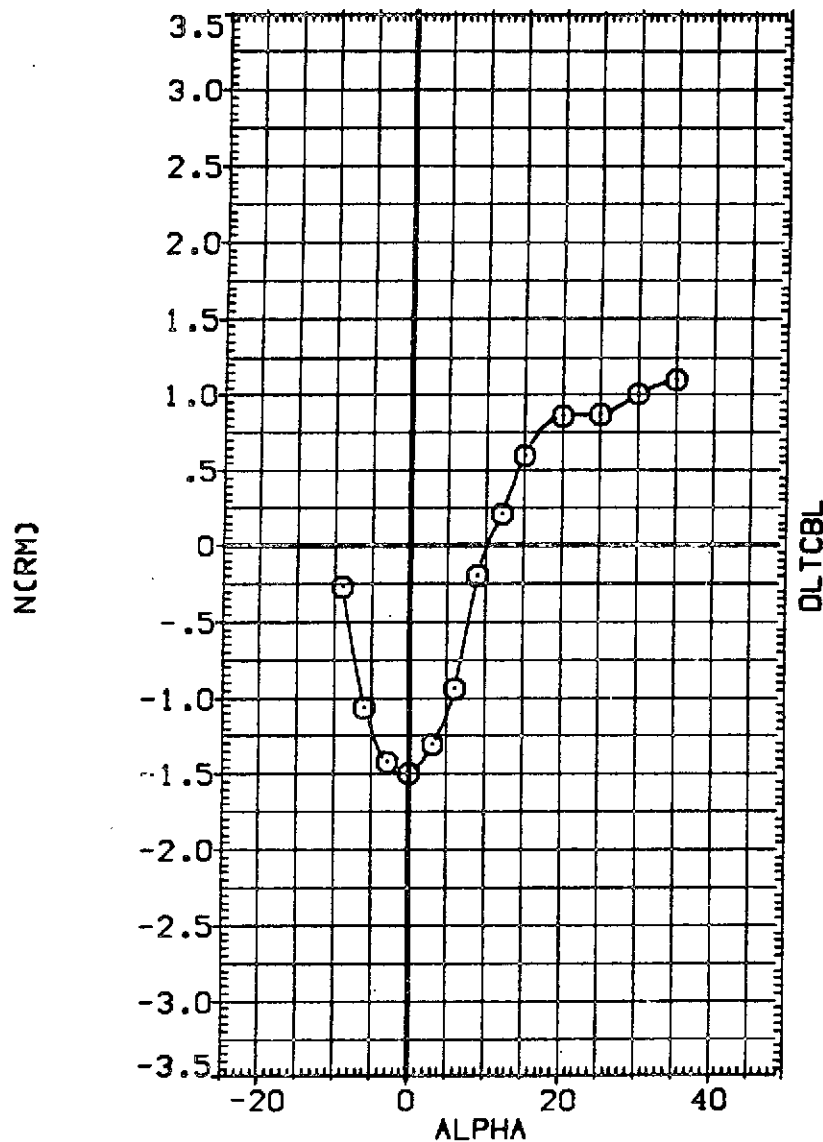


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH
 (A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC13) ○ 0A82 CFHT113 MODEL 32-0 ORB V/N84 (AIR)

| Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|---------|
| 150.000 | 161.000 | 70.000 | 47.500 | SREF 2690.0000 | 50. FT. |
| | | | | LREF 474.8100 | IN. |
| | | | | BREF 936.6800 | IN. |
| | | | | XMRP 1076.7000 | IN. |
| | | | | YMRP .0000 | IN. |
| | | | | ZMRP 375.0000 | IN. |
| | | | | SCALE .0100 | |

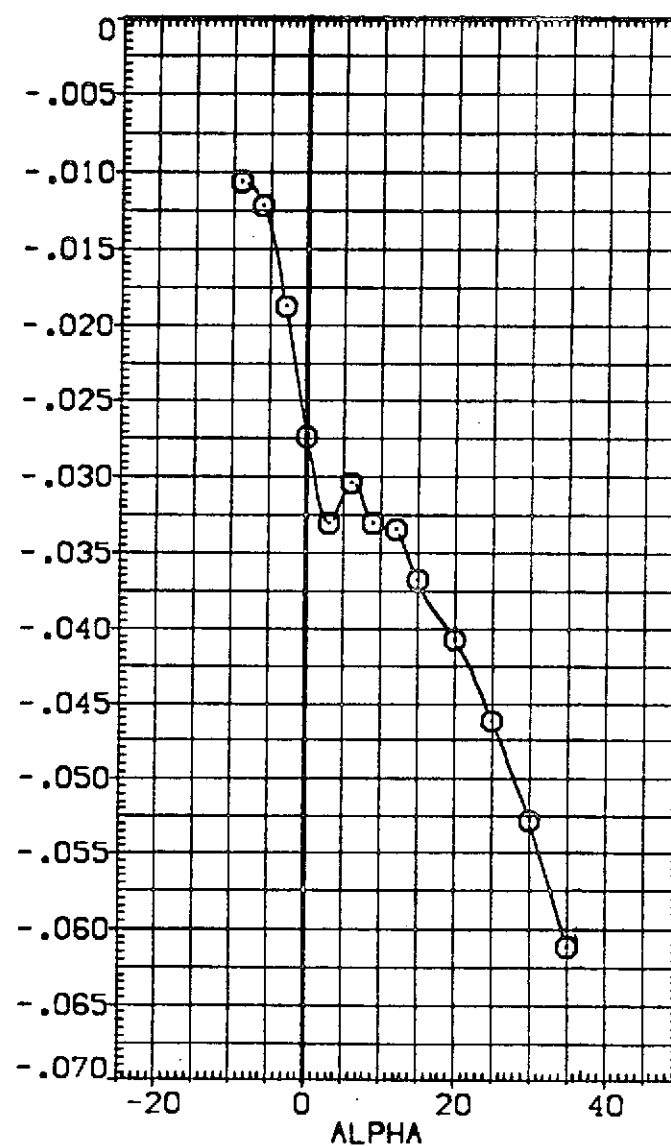
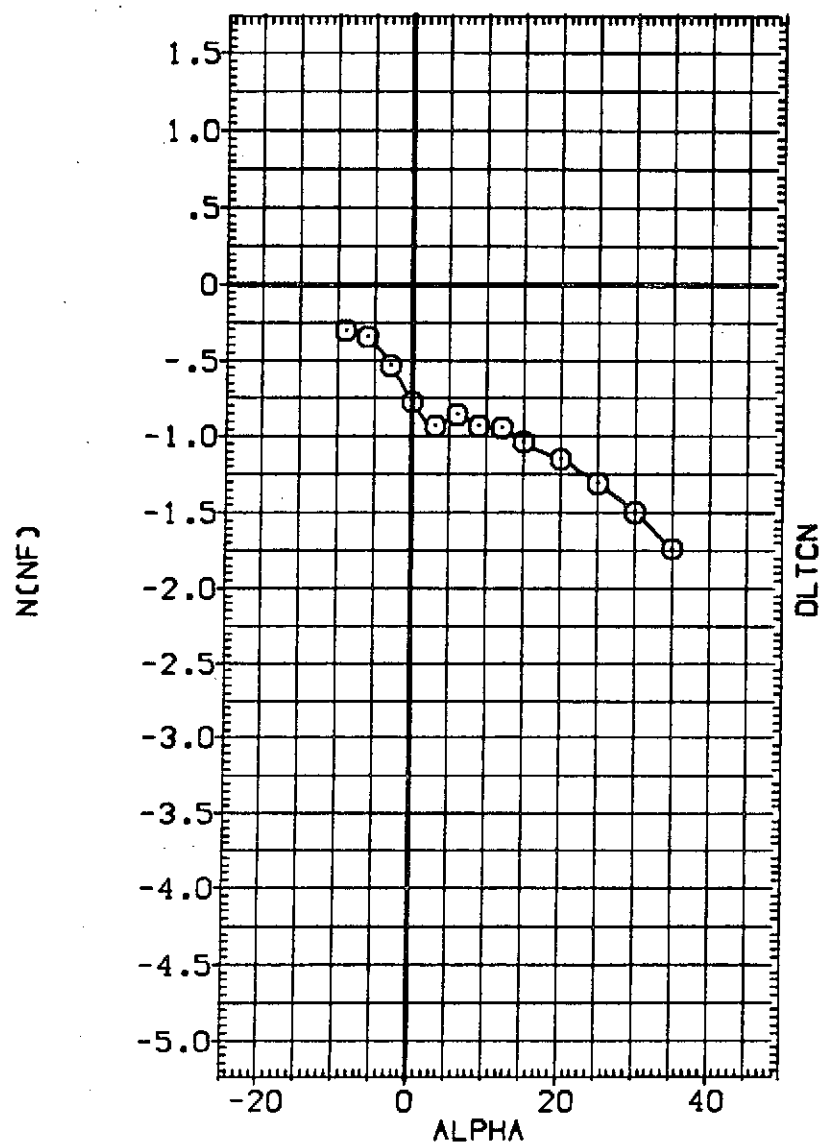


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH

(A) MACH = 10.30

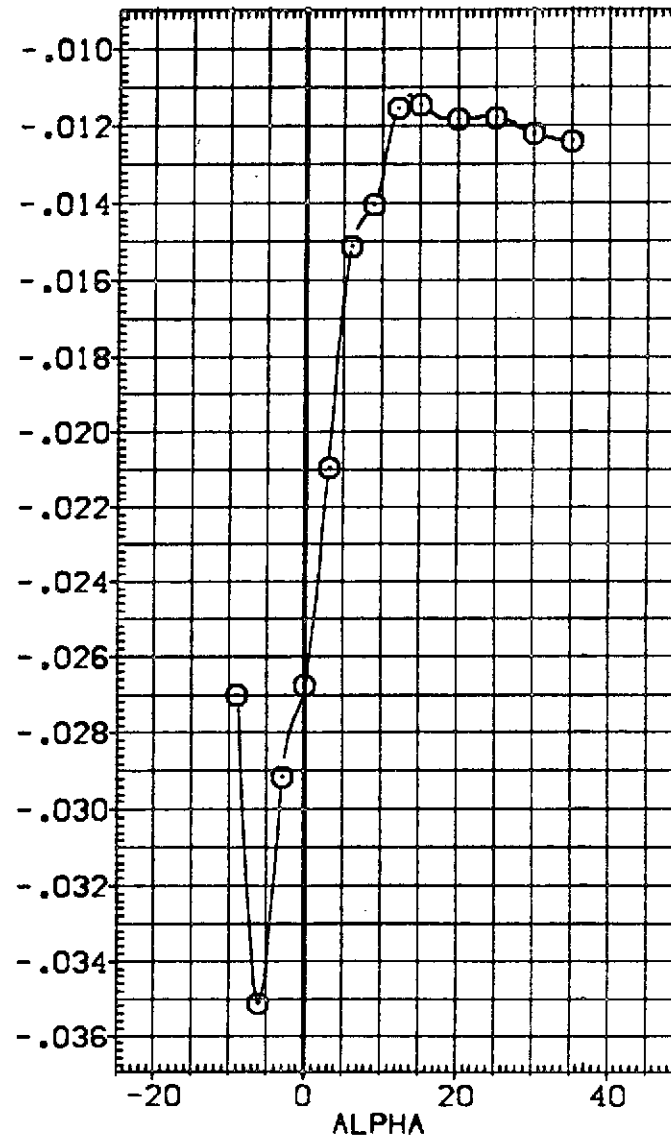
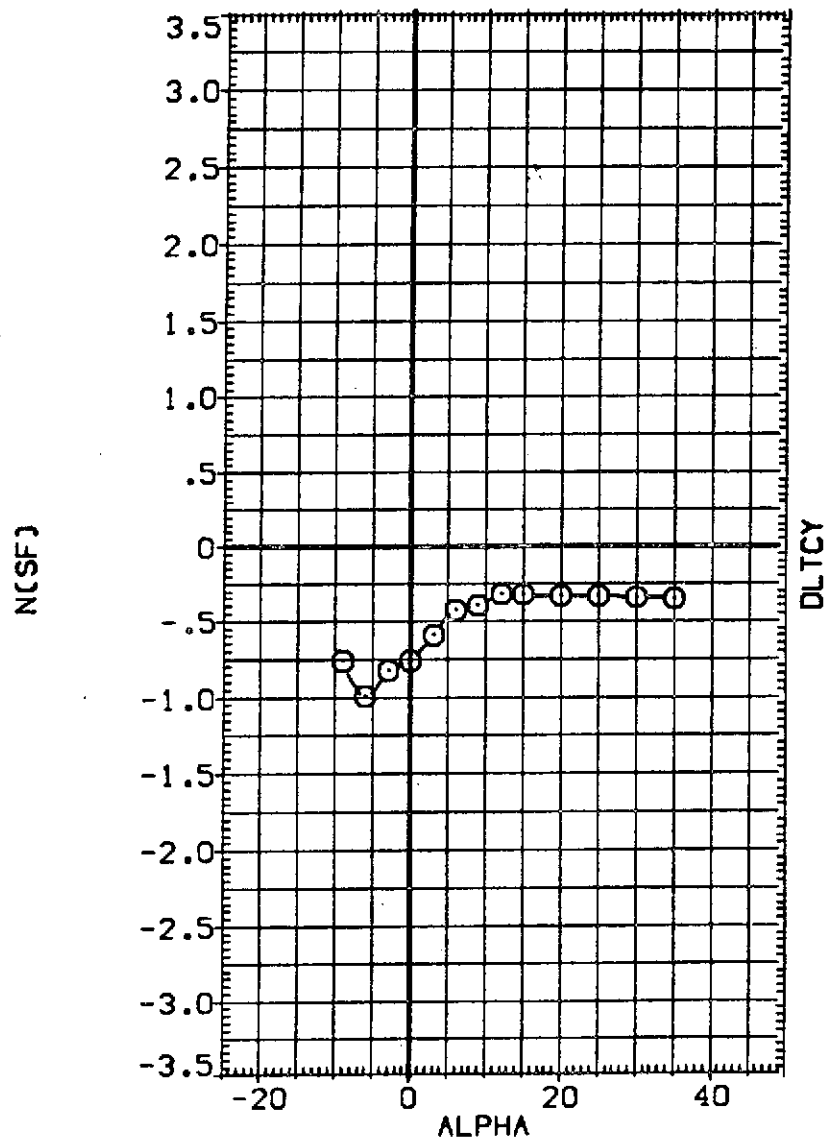


FIG. 14 EFFECT OF N84 USING AIR ON AERO CHARACT IN PITCH

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|
| (RHLF02) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL012) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | 150.000 | 161.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

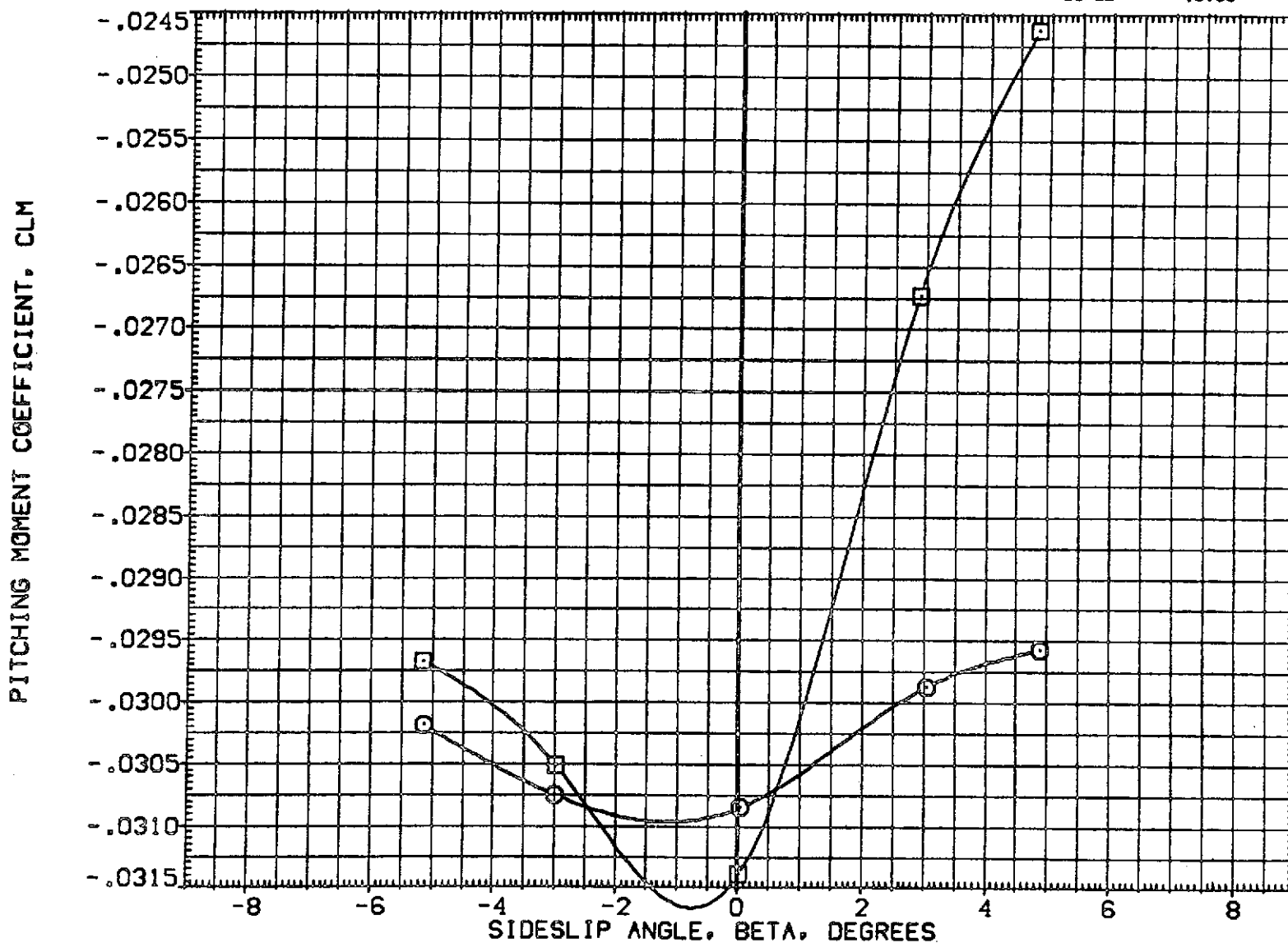


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | YCRS | Y/BA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| [RHL02] ○ | 0A82 CFHT113 MODEL 32-0 CRB V/N84 | 150.000 | .000 | .000 | .000 | QREF 2800.0000 90.FT. |
| [RHL012] □ | 0A82 CFHT113 MODEL 32-0 CRB V/N84 (AIR) | 150.000 | 101.000 | 70.000 | 47.500 | LREF 474.9100 IN. |
| | | | | | | BREF 300.6800 IN. |
| | | | | | | XMRP 1070.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 370.0000 IN. |
| | | | | | | SCALE .0100 |

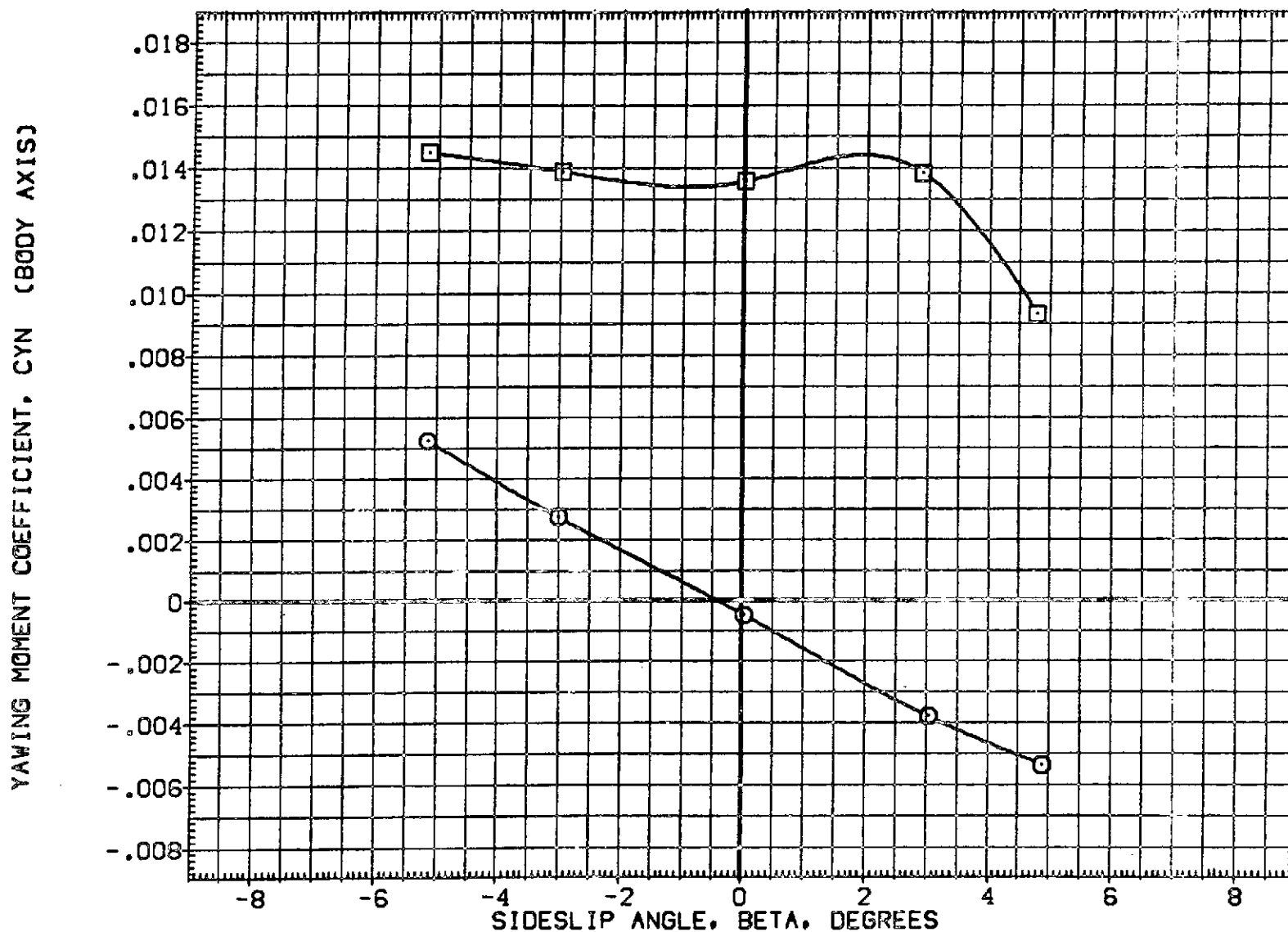


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| [RHLF02] | 0A82 CFHT113 MODEL 32-0 OR8 V/N84 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [RHL012] | 0A82 CFHT113 MODEL 32-0 OR8 V/N84 (AIR) | 150.000 | 161.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

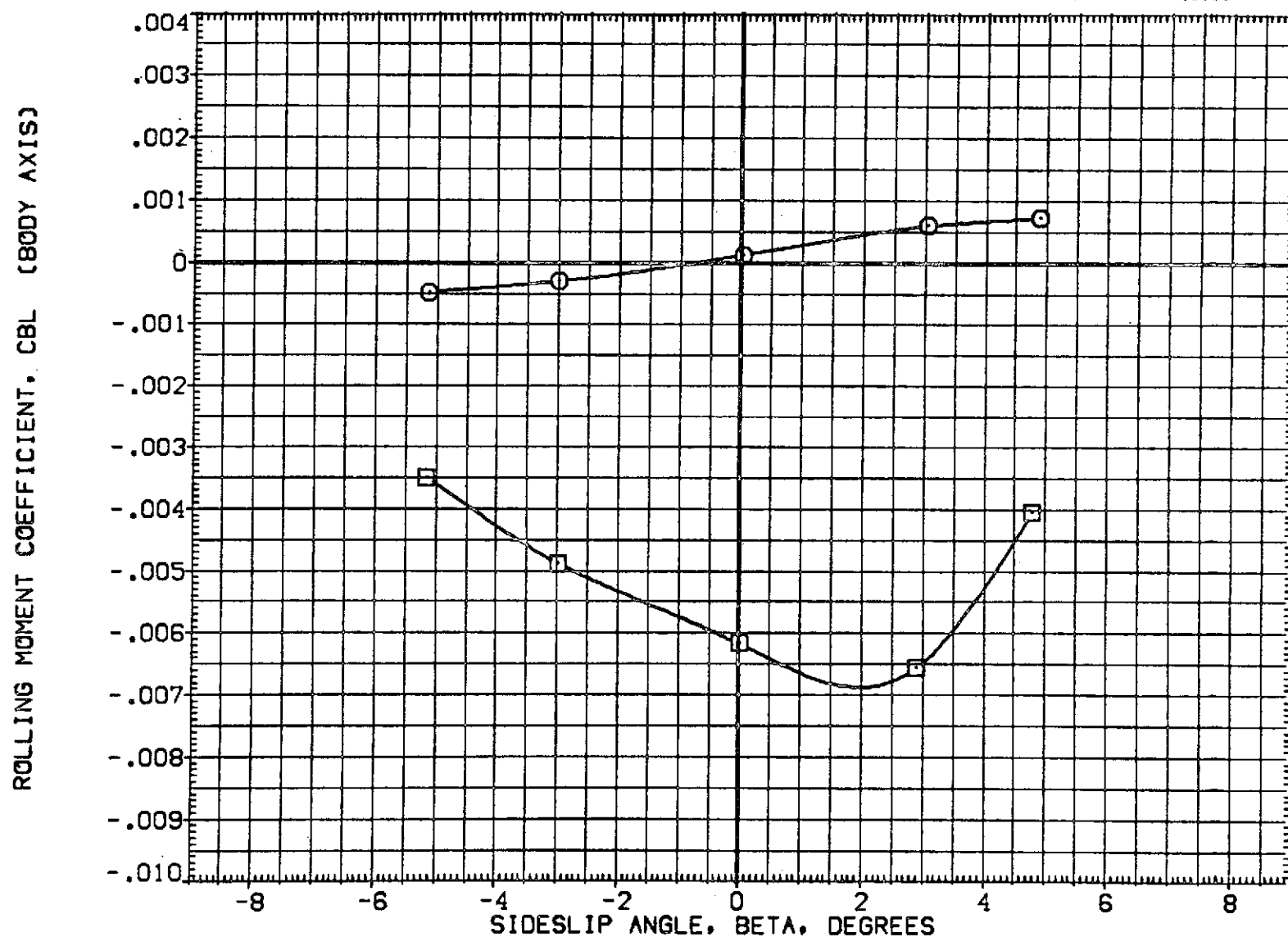


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|
| (RHLF02) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL012) | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | 150.000 | 161.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

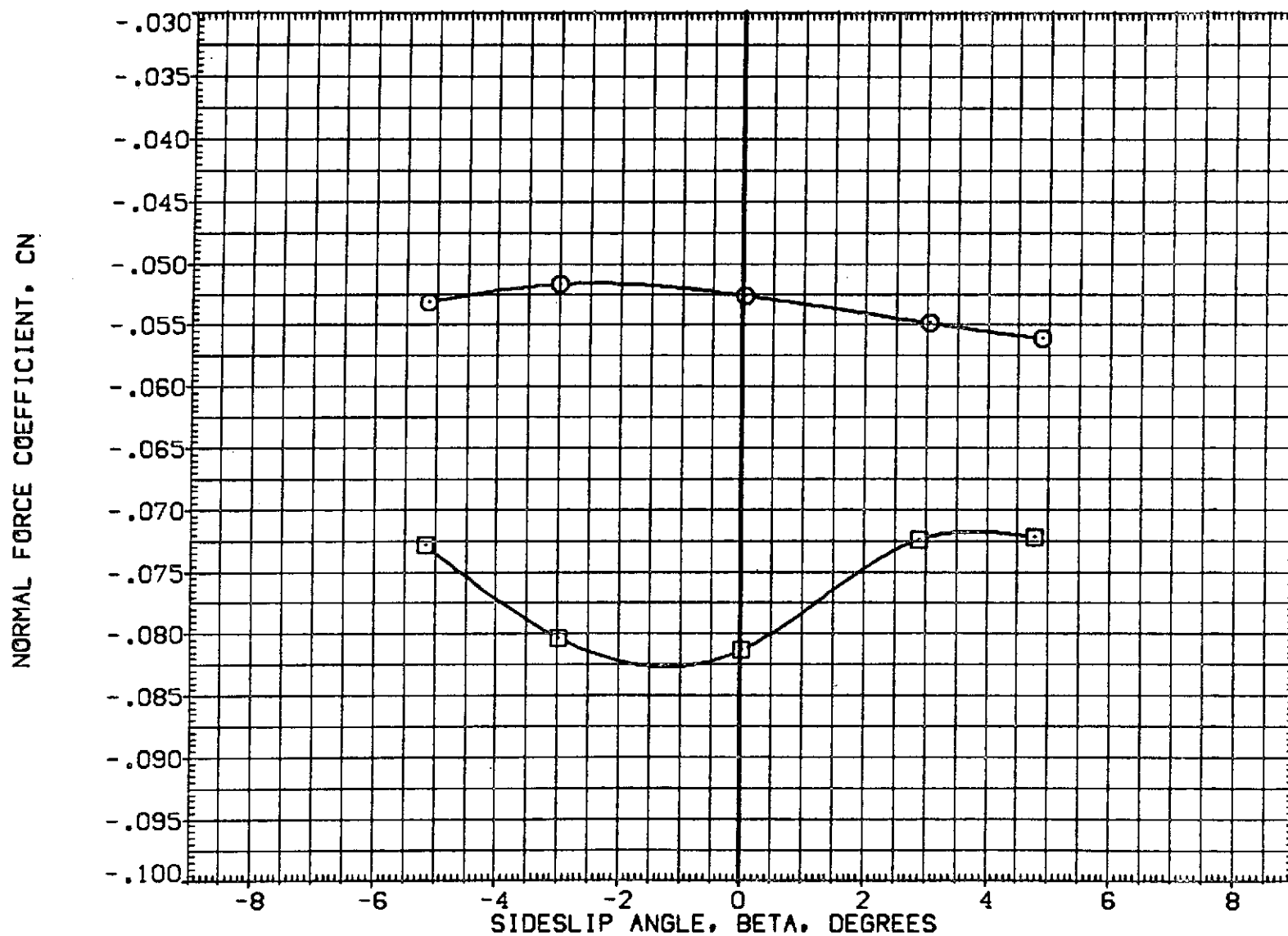


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF02) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL012) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 (AIR) | 150.000 | 161.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6800 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

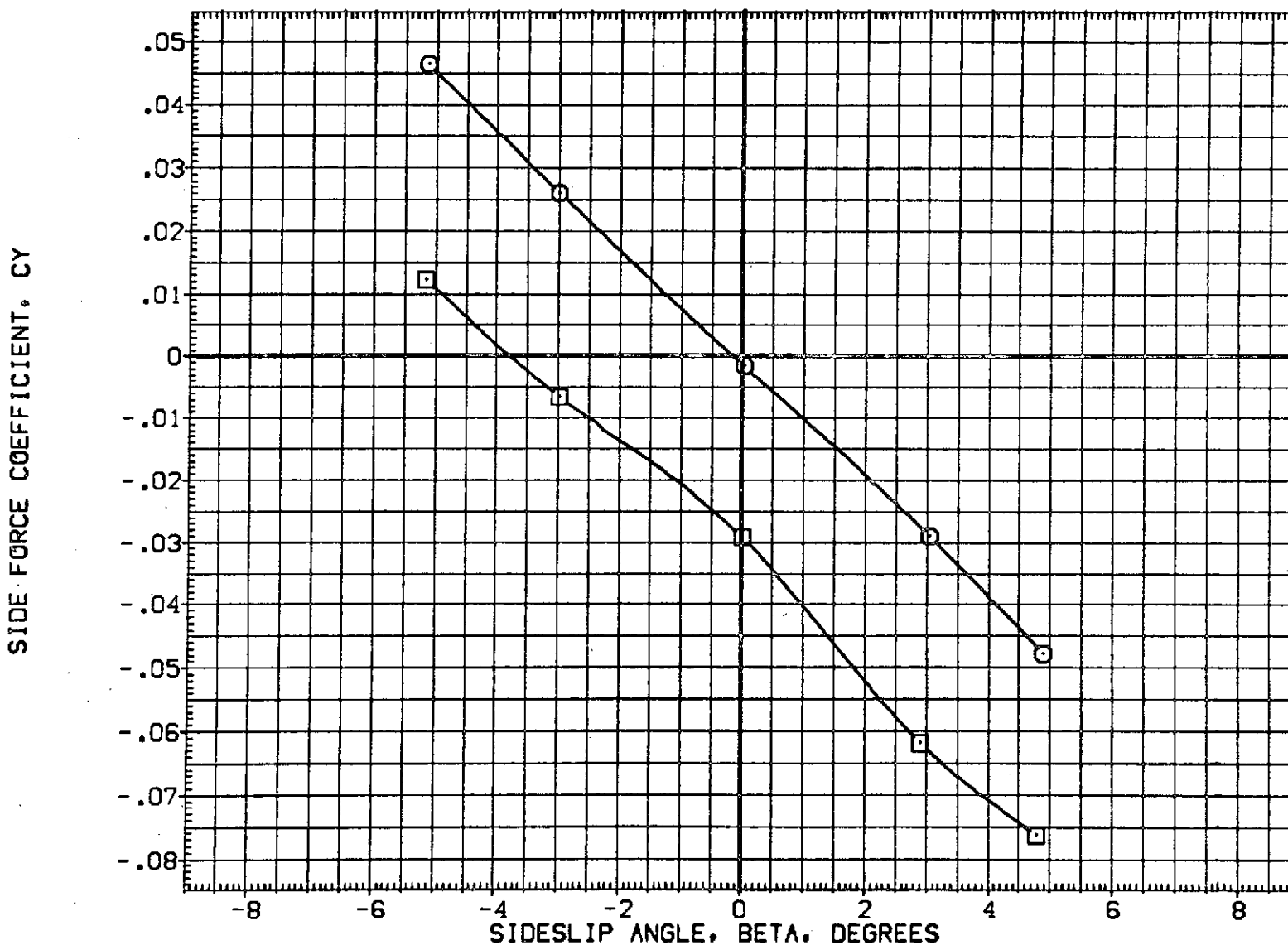


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | FORCS | TCRCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF02) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 | 150,000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL012) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 (AIR) | 150,000 | 161,000 | 70,000 | 47,500 | LREF 474.8100 IN. |
| | | | | | | BREF 936.6600 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

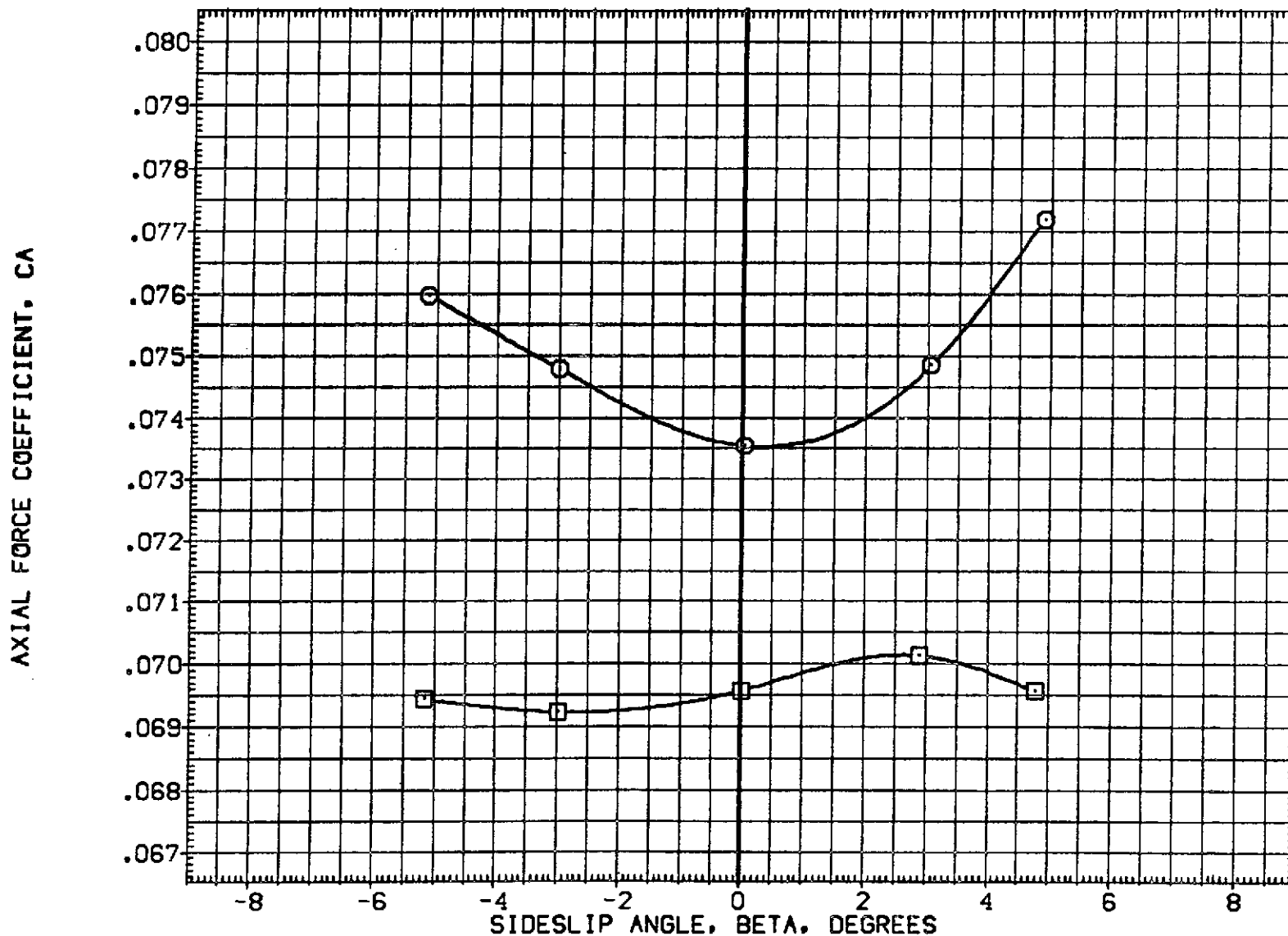


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC12) ○ GAB2 CFHT113 MODEL 32-0 OR9 V/N84 (AIR)

| Q(PSF) | PCRCB | TCRCB | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|--------|
| 150,000 | 161,000 | 70,000 | 47.500 | SREF 2690.0000 | 50.FT. |
| | | | | LREF 474.9100 | IN. |
| | | | | BREF 936.6800 | IN. |
| | | | | XMRP 1076.7000 | IN. |
| | | | | YMRP .0000 | IN. |
| | | | | ZMRP 375.0000 | IN. |
| | | | | SCALE .0100 | |

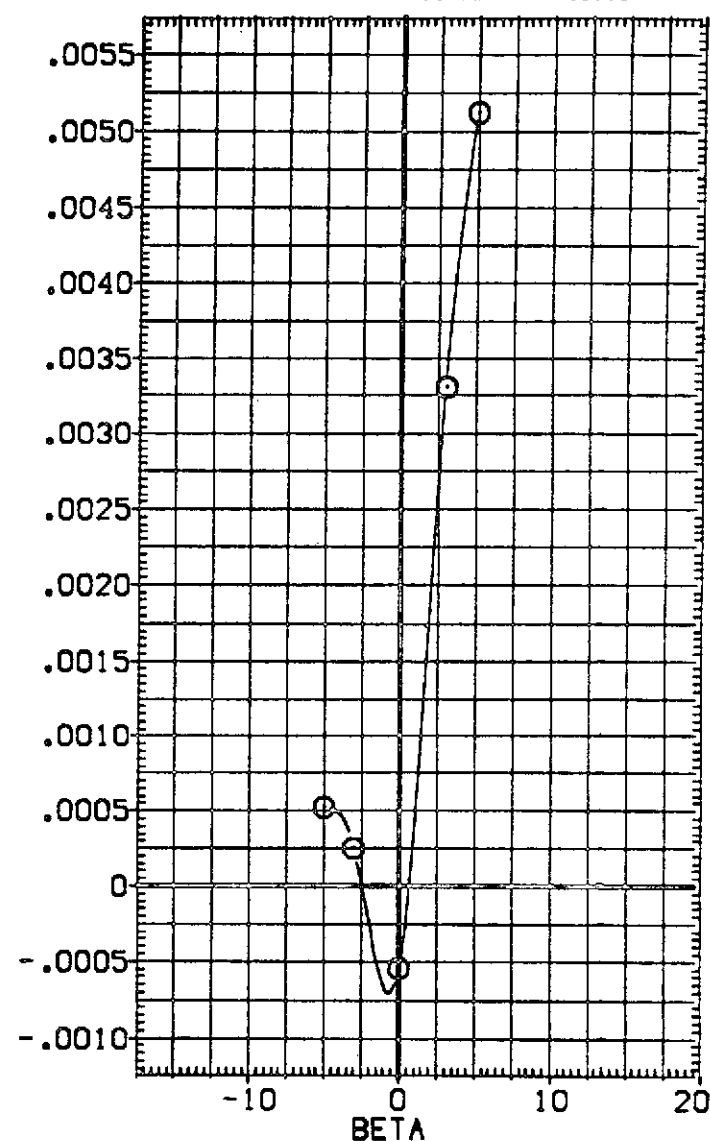
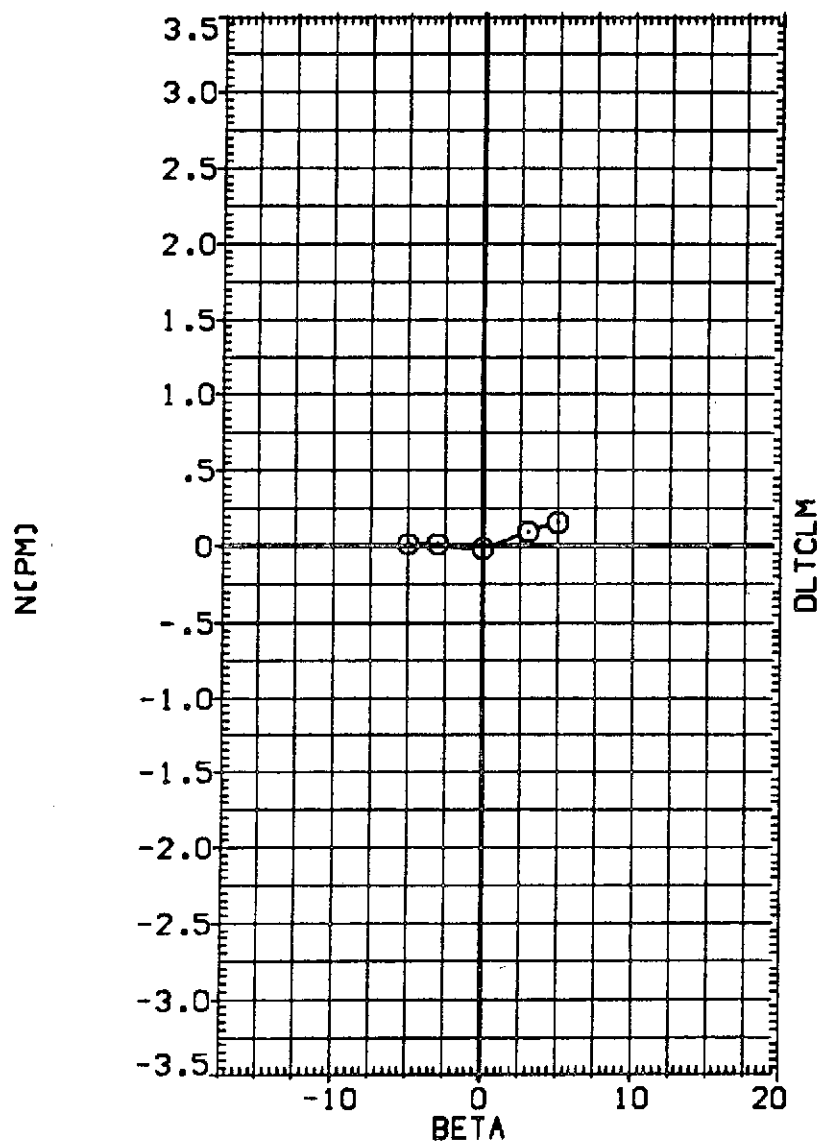


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC12) ○ OAS2 CFHT113 MODEL 32-0 ORB V/N84 (AIR)

| Q(PSF) | PCRC | TCRC | T/OA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|--------|
| 150.000 | 161.000 | 70.000 | 47.500 | SREF 2690.0000 | SQ.FT. |
| | | | | LREF 474.8100 | IN. |
| | | | | BREF 936.6800 | IN. |
| | | | | XMRP 1076.7000 | IN. |
| | | | | YMRP .0000 | IN. |
| | | | | ZMRP 375.0000 | IN. |
| | | | | SCALE .0100 | |

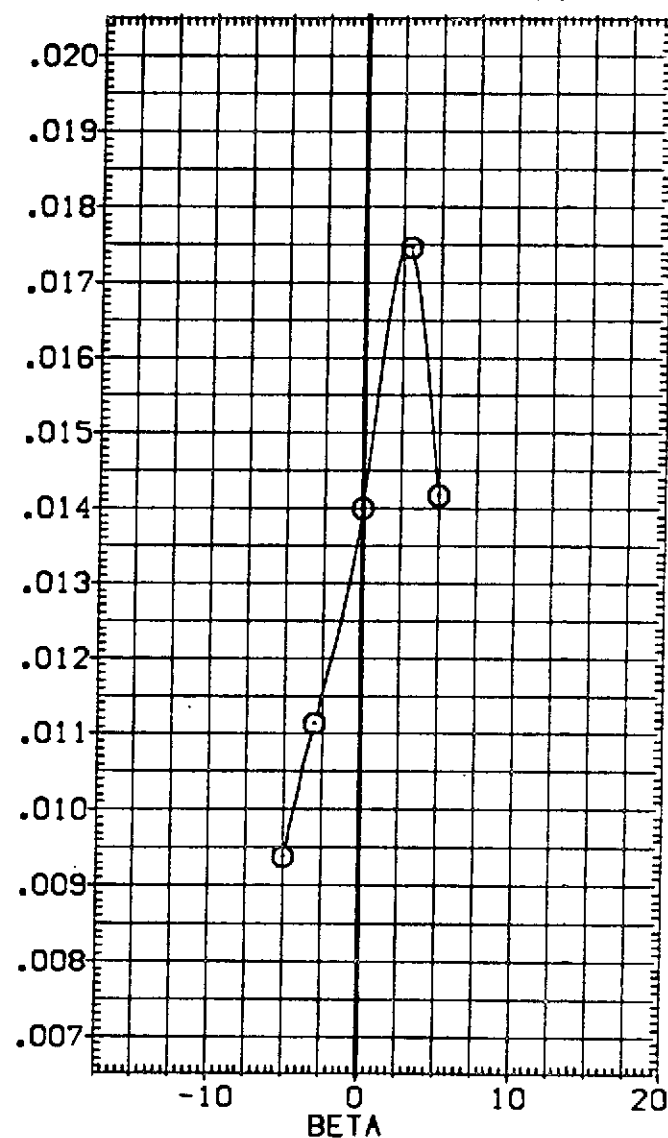
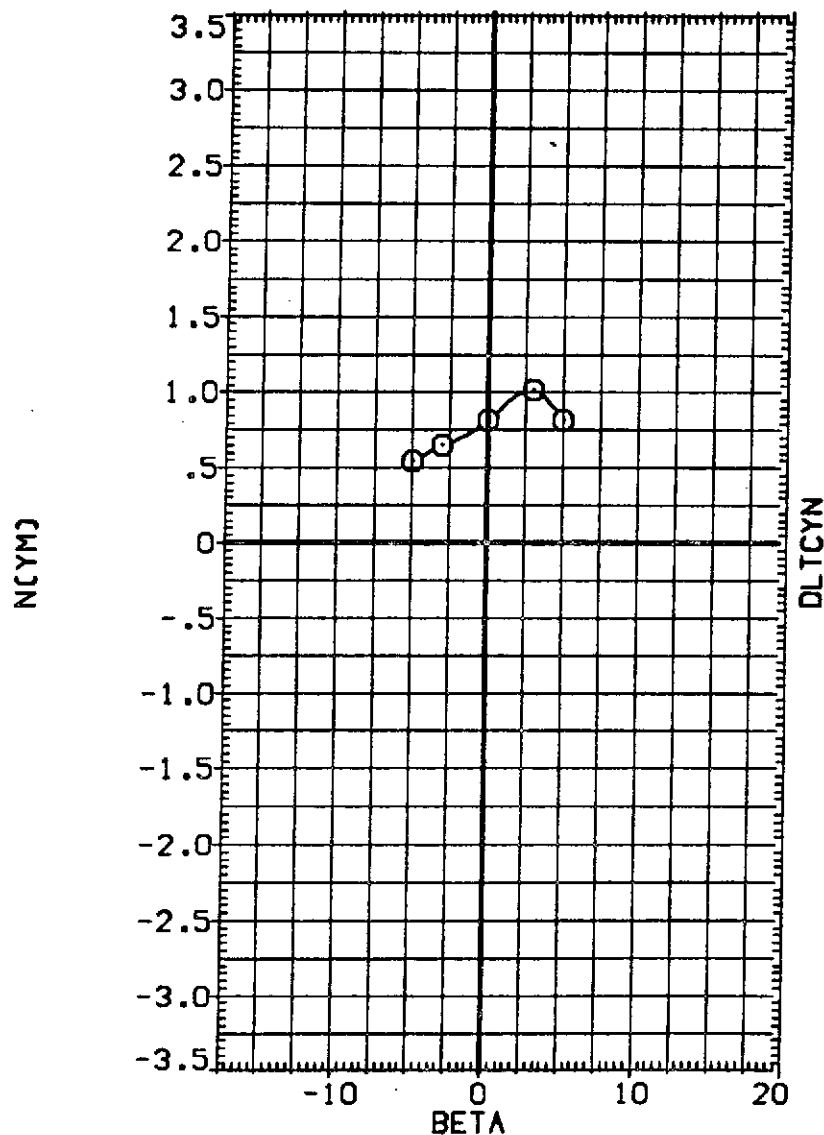


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC12) ○ 0A82 CFHT113 MODEL 32-0 ORB V/N84 (AIR)

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 161.000 | 70.000 | 47.500 | SREF | 2650.0000 SQ.FT. |
| | | | | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

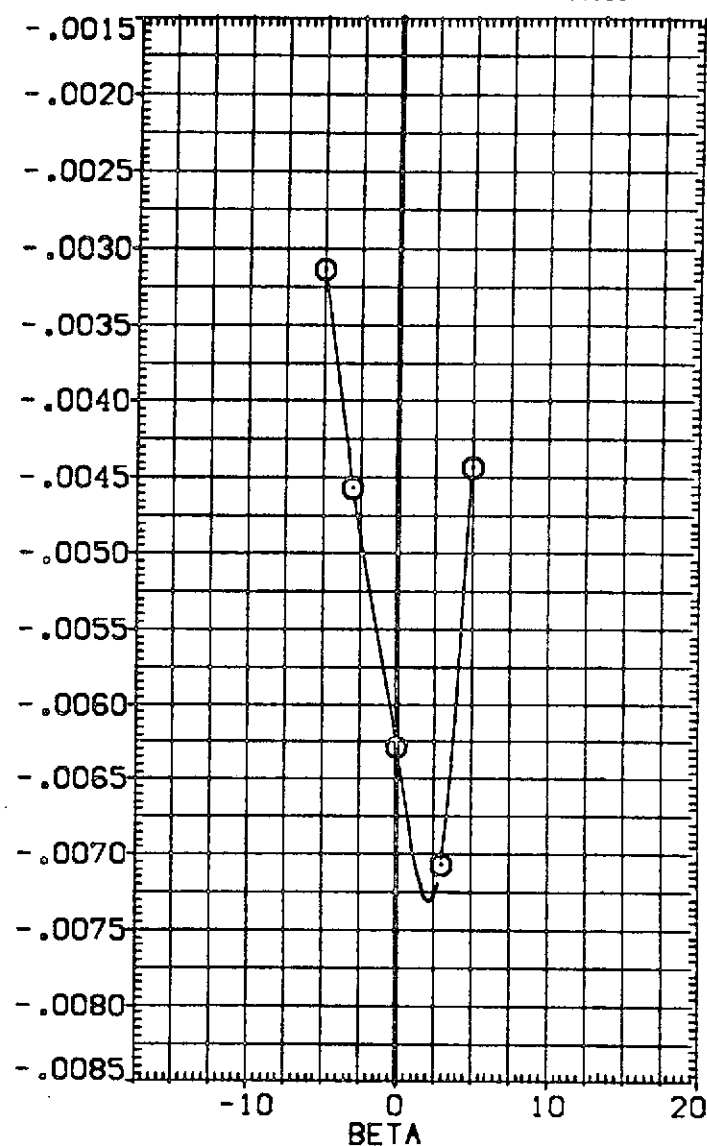
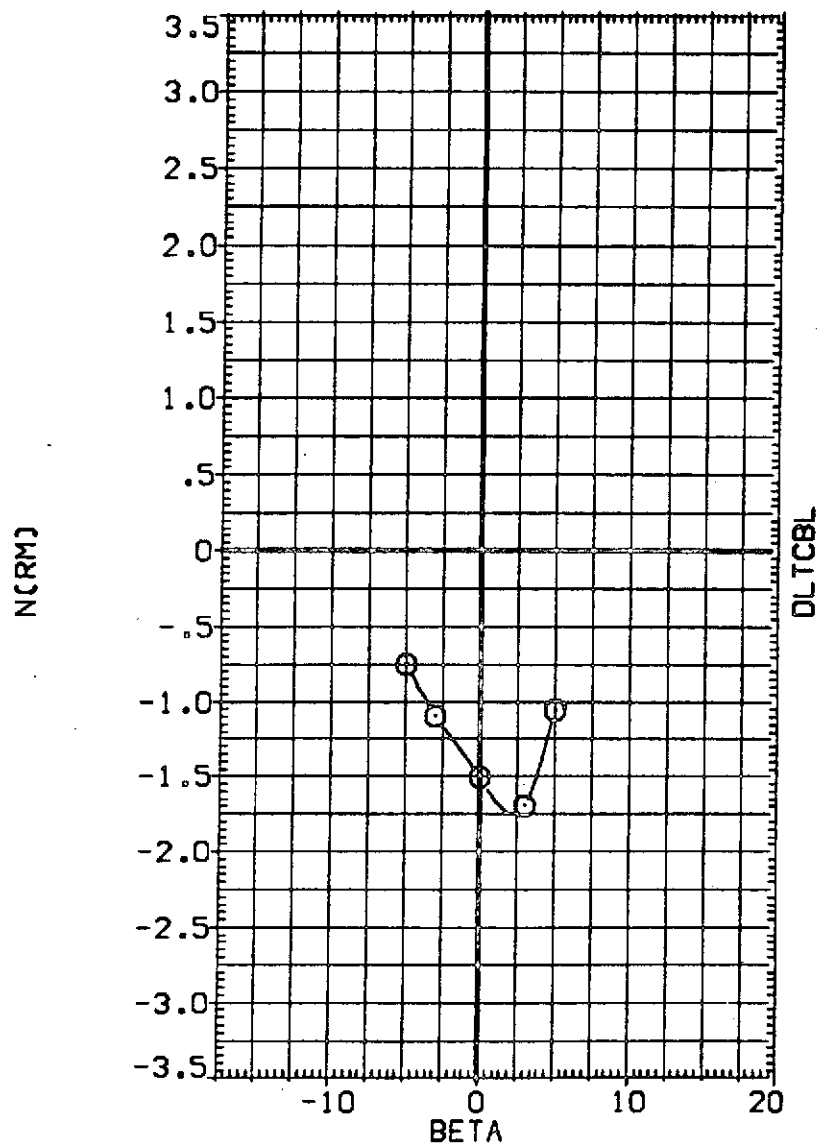


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP

(A)MACH = 10.30

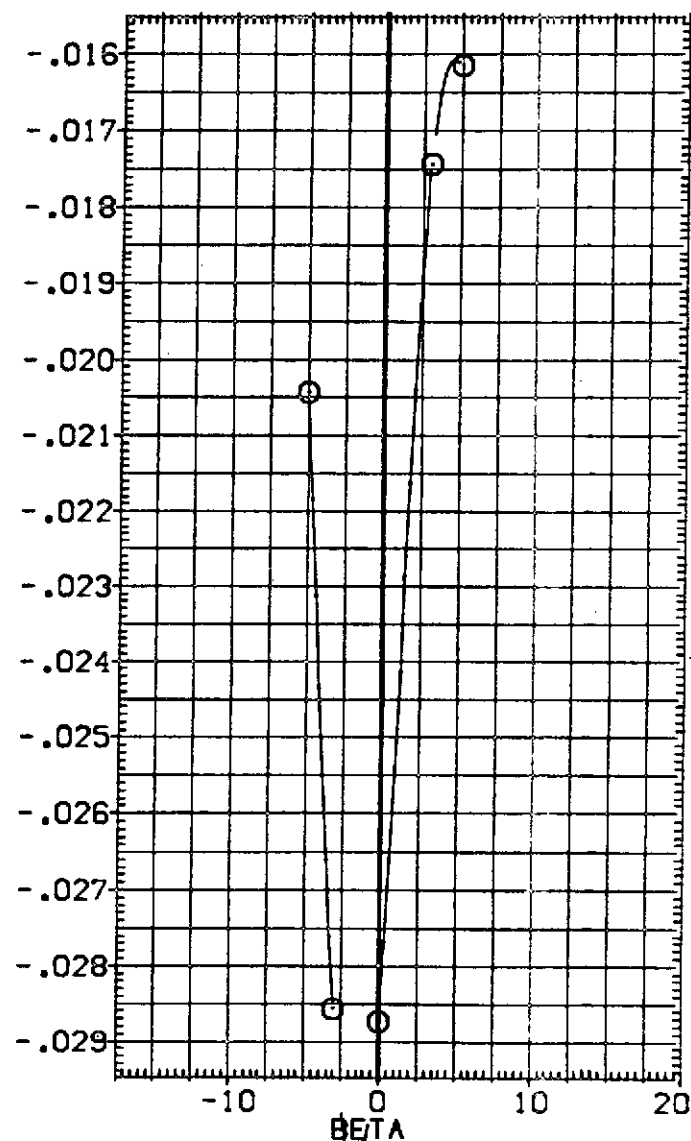
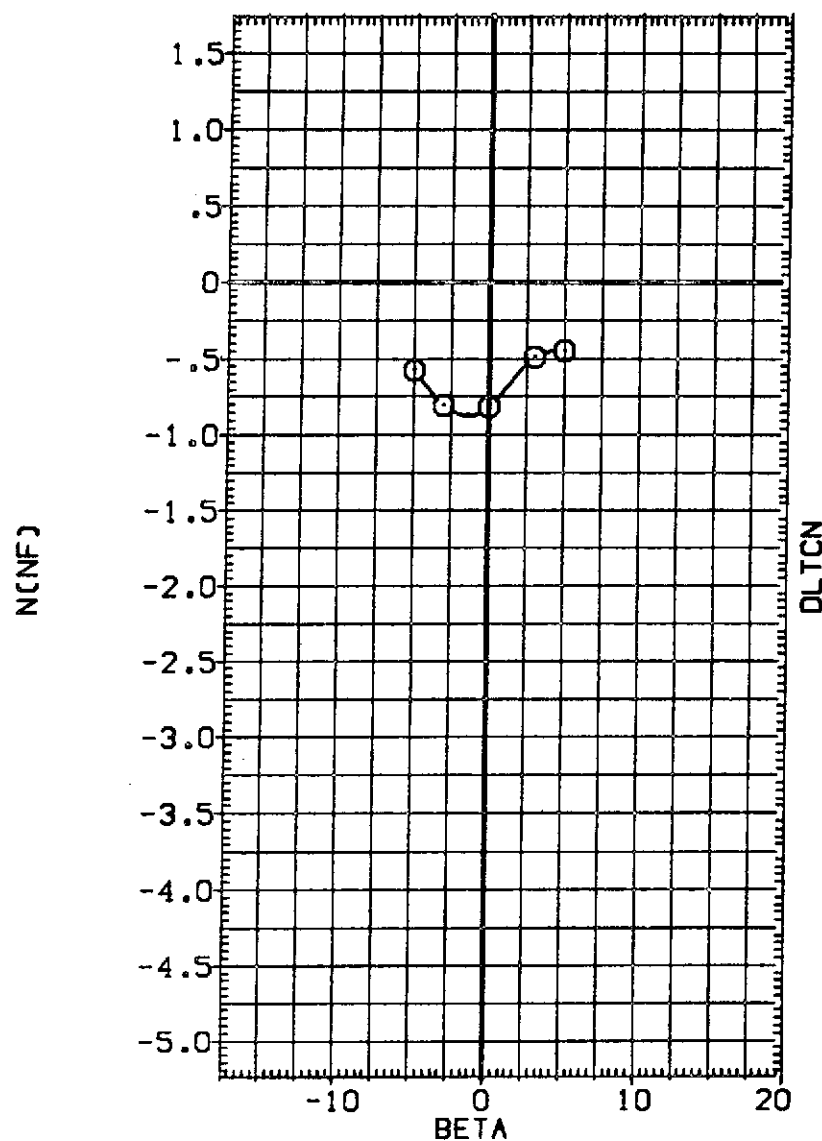


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP
 (A) MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (CHLC12) ○ OA82 CFHT113 MODEL 32-0 ORB V/N84 (AIR)

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 161.000 | 70.000 | 47.500 | SREF | 2680.0000 SQ.FT. |
| | | | | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

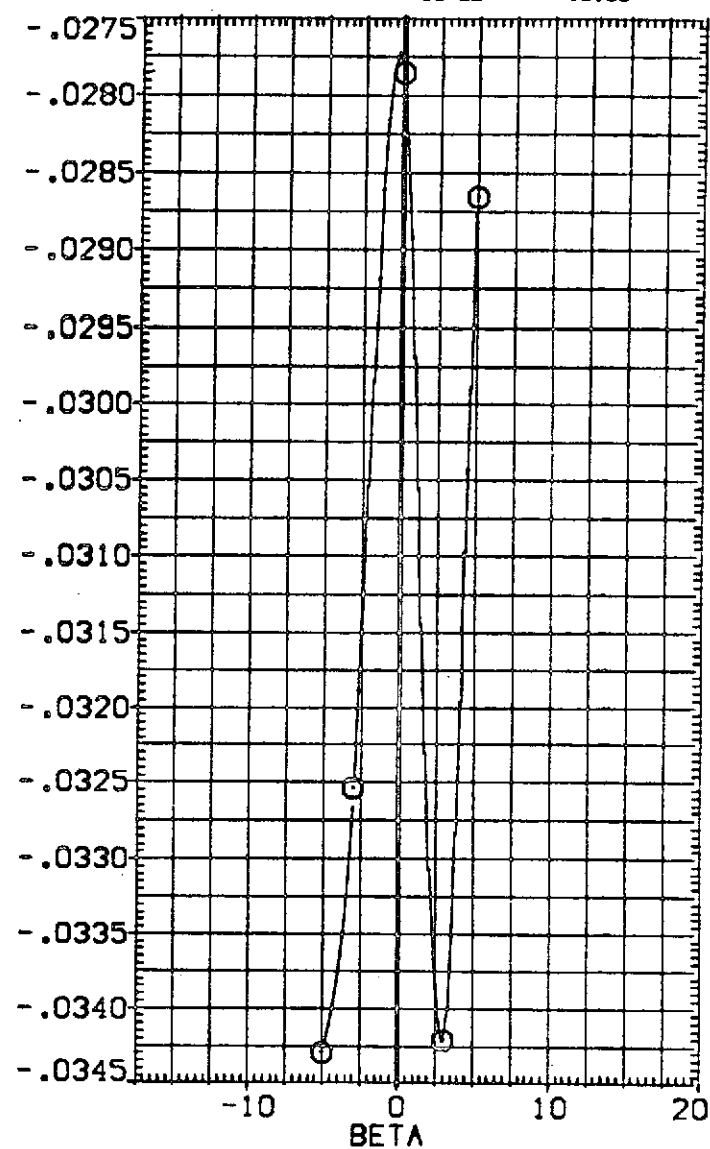
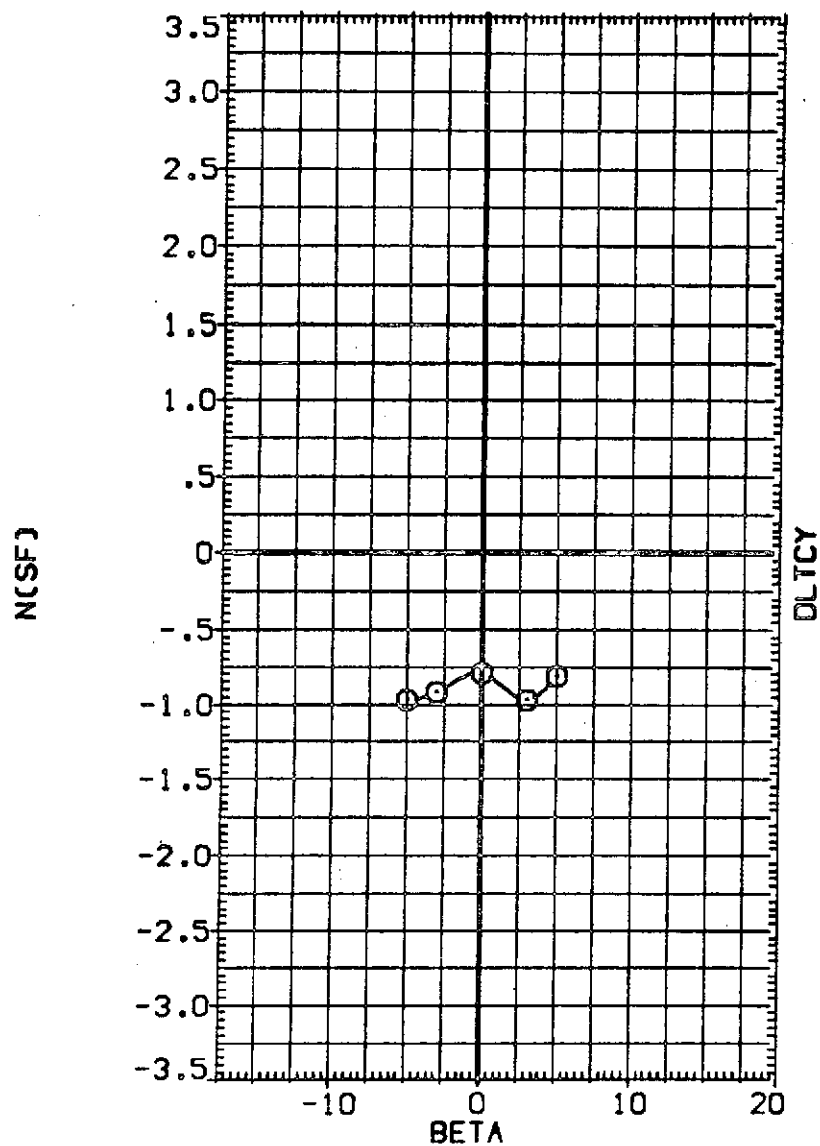


FIG. 15 EFFECT OF N84 USING AIR ON AERO CHARACT IN SIDESLIP

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PERCS | TCRCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|--------|-----------------------|-----------|--------|
| [RHLF04] | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2390.0000 | 90.FT. |
| [RHL014] | 0A82 CFHT113 MODEL 32-0 OR8 V/N79 [AIR] | 150.000 | 155.000 | 76.000 | 47.500 | LREF | 474.9100 | IN. |
| [RHL001] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 [AIR] | 150.000 | 155.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| [RHL016] | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 [AIR] | 150.000 | 158.000 | 70.000 | 47.500 | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

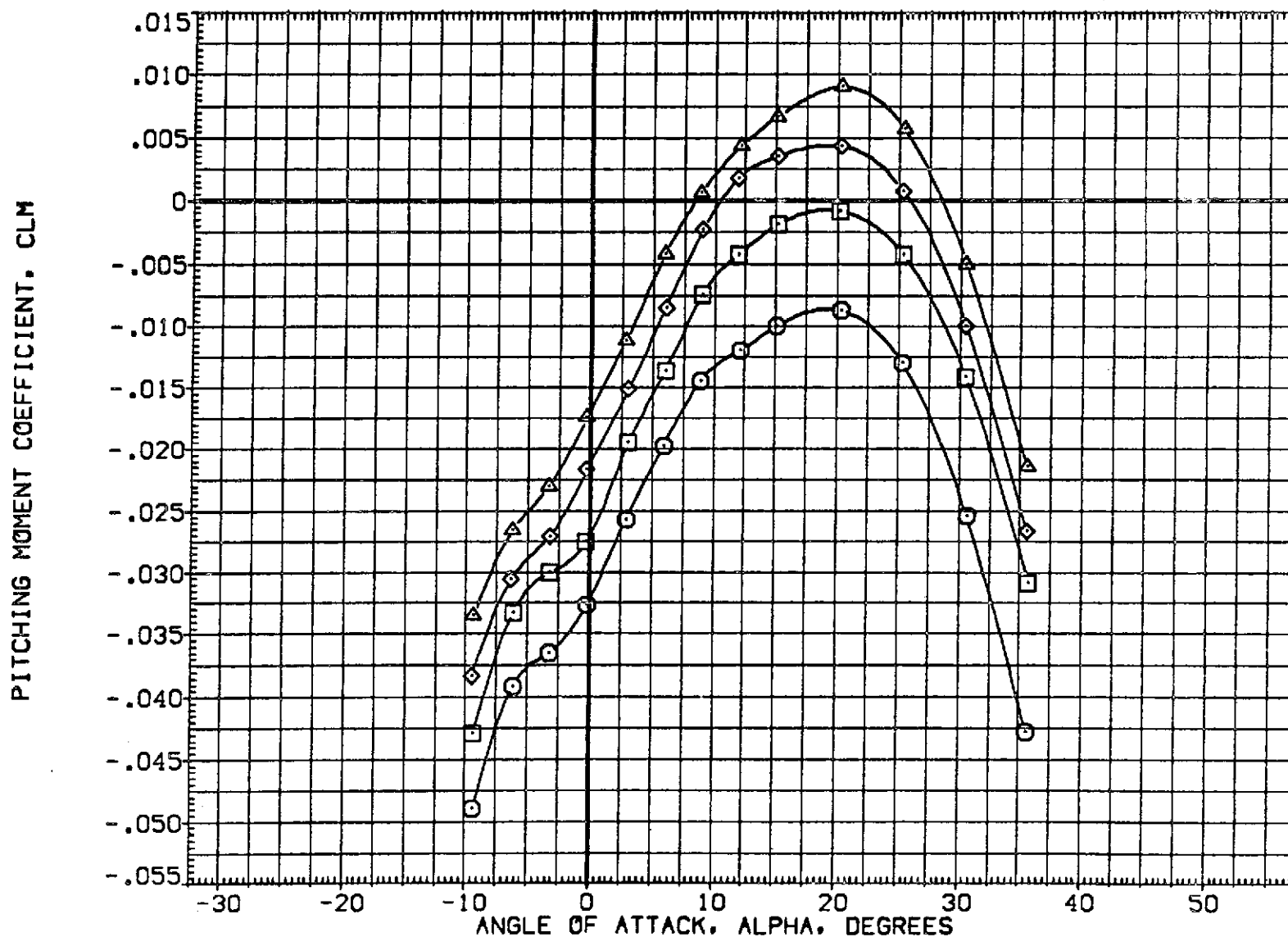


FIG. 16 COMPARISON OF N79,N49 AND N83 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL014) | 0A82 CFHT113 MODEL 32-0 ORB V/N79 | [AIR] | 150.000 | 155.000 | 76.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL001) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 150.000 | 155.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| (RHL016) | 0A82 CFHT113 MODEL 32-0 ORB V/N83 | [AIR] | 150.000 | 158.000 | 70.000 | 47.500 | XMRP | 1076.7000 IN. |
| | | | | | | | YMRP | .0000 IN. |
| | | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

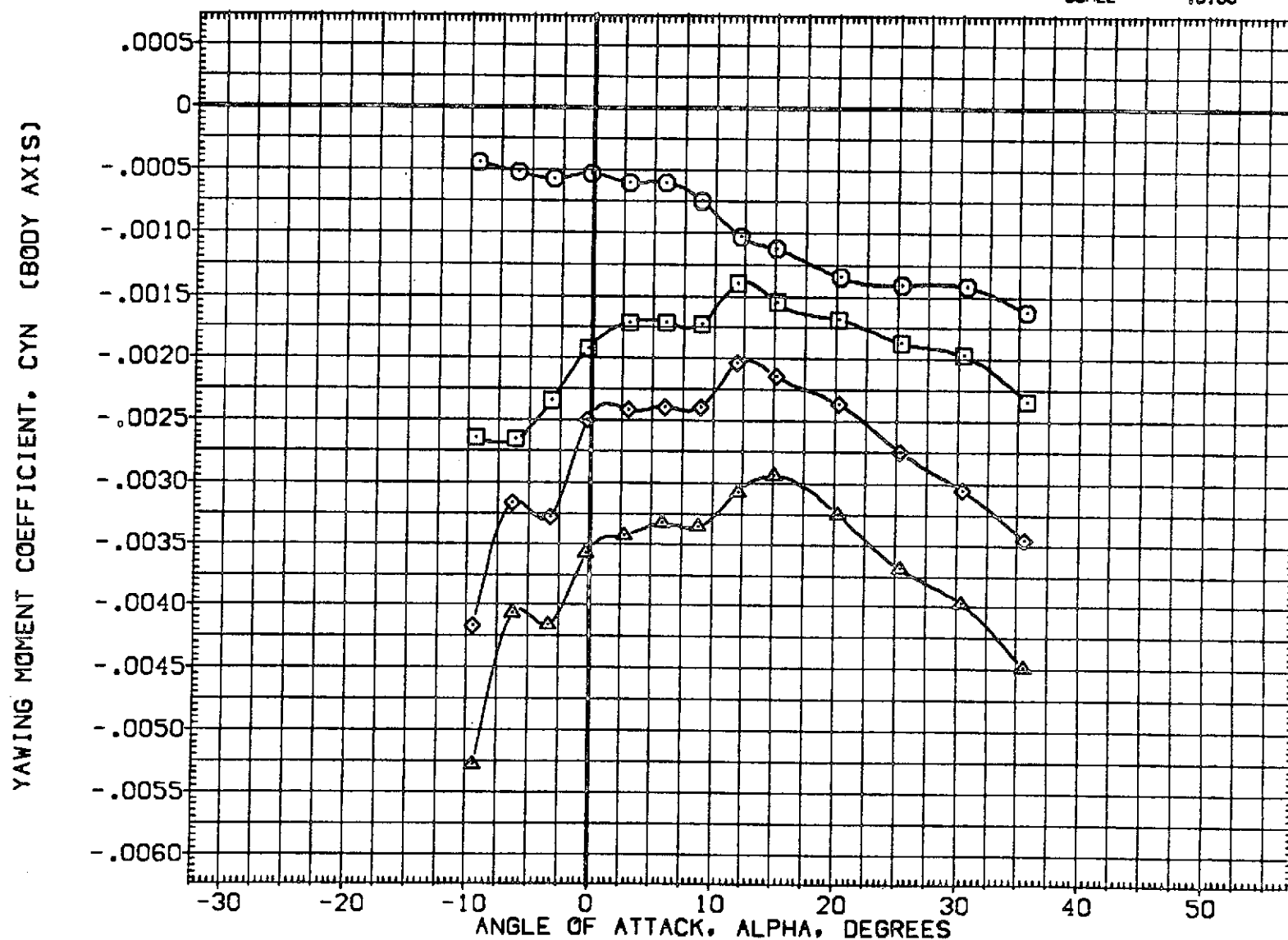


FIG. 16 COMPARISON OF N79,N49 AND N83 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHL004) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL014) | 0A82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 150.000 | 155.000 | 76.000 | 47.500 | LREF 474.9100 IN. |
| (RHL001) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 69.000 | 47.500 | BREF 936.6800 IN. |
| (RHL016) | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

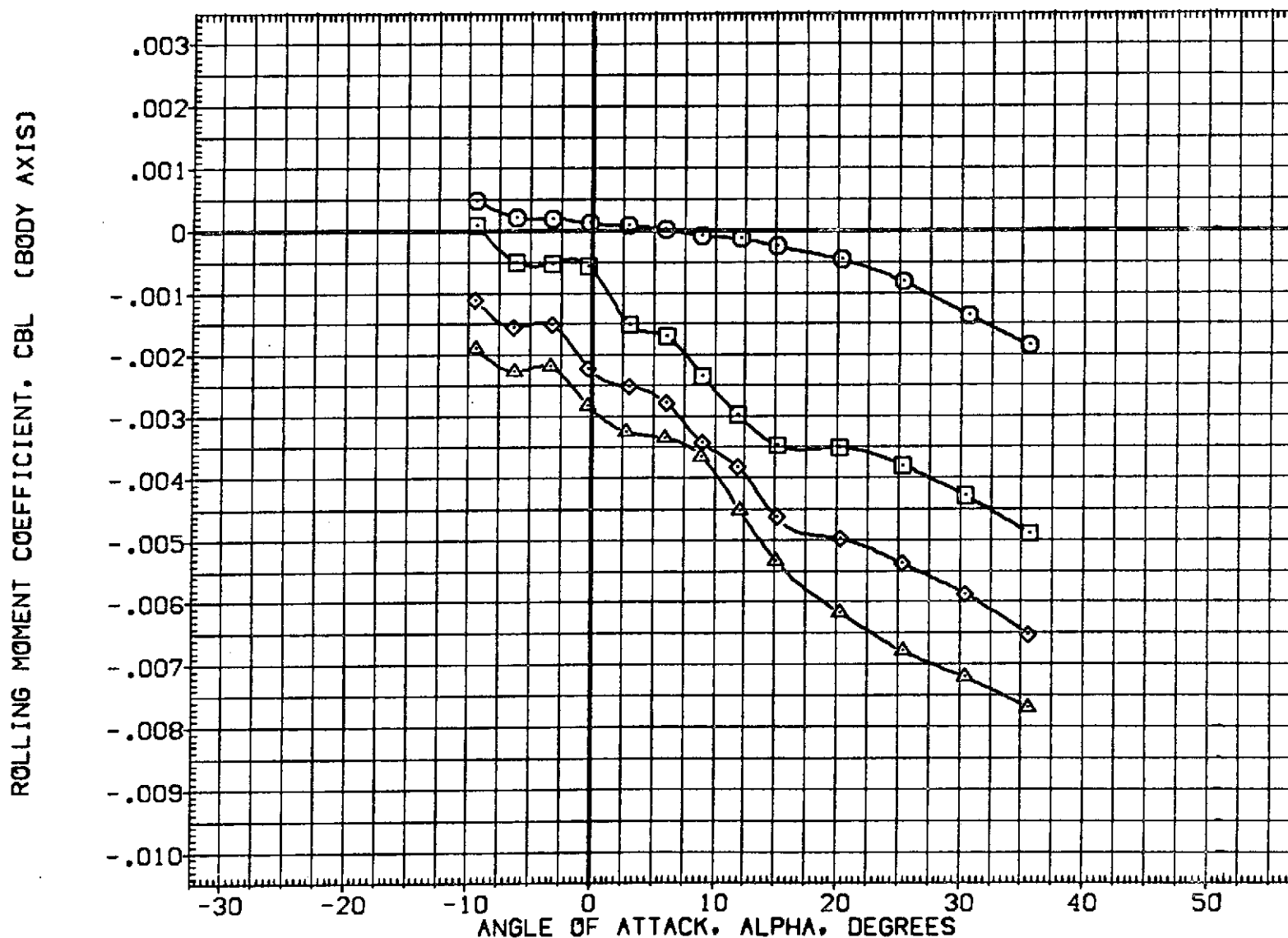


FIG. 16 COMPARISON OF N79,N49 AND N83 USING AIR AERO CHARACT IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|--|
| (RHLF04) | OA82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL014) | OA82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 150.000 | 155.000 | 76.000 | 47.500 | LREF 474.8100 IN. |
| (RHL001) | OA82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | BREF 936.6800 IN. |
| (RHL016) | OA82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. YMRP .0000 IN. ZMRP 375.0000 IN. SCALE .0100 |

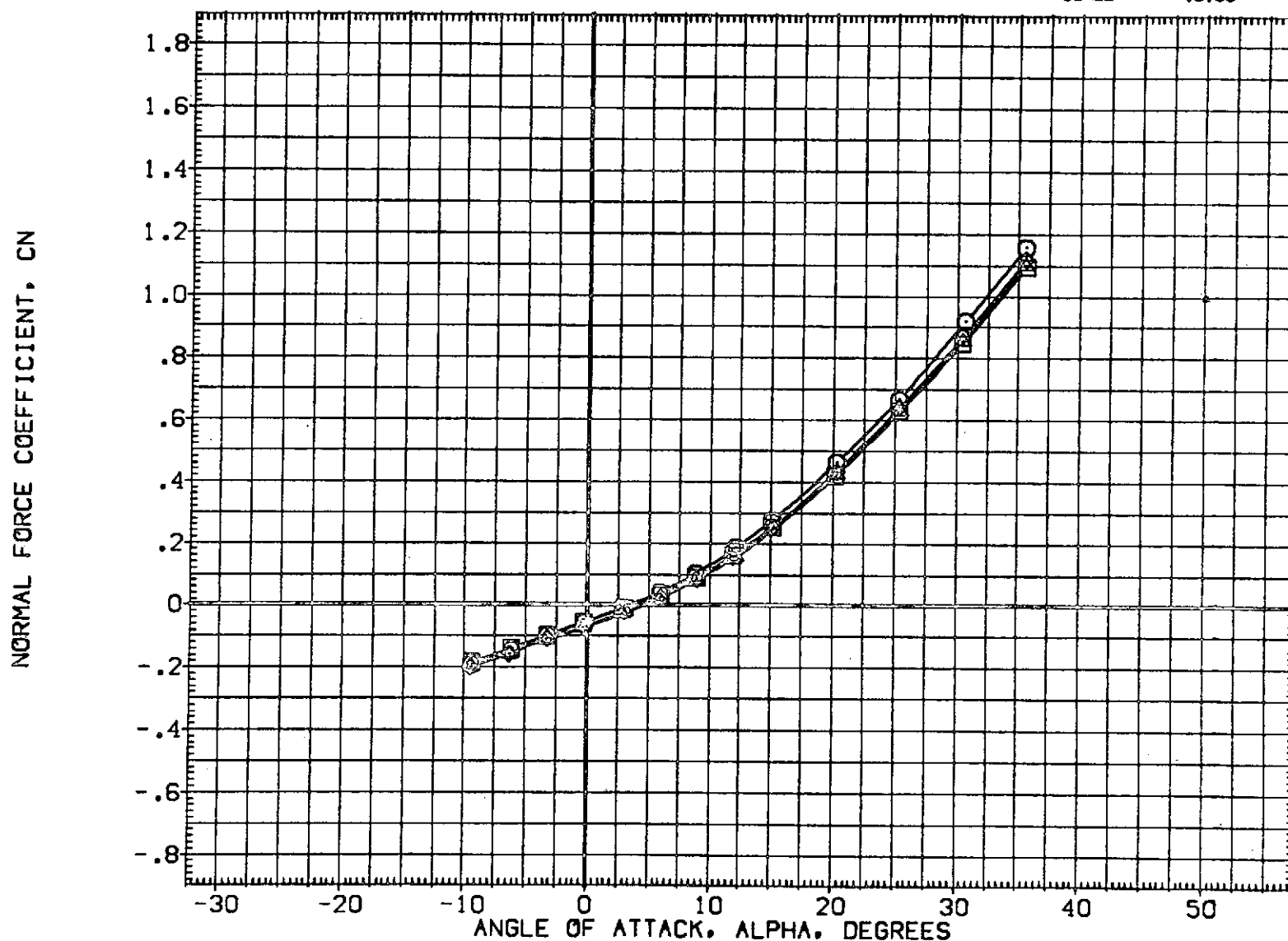


FIG. 16 COMPARISON OF N79,N49 AND N83 USING AIR AERO CHARACT IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL014) | 0A82 CFHT113 MODEL 32-0 ORB V/N79 | (AIR) | 150.000 | 155.000 | 76.000 | 47.500 | LREF 474.8100 IN. |
| (RHL001) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | BREF 936.6800 IN. |
| (RHL016) | 0A82 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | | | | YMRP .0000 IN. |
| | | | | | | | ZMRP 375.0000 IN. |
| | | | | | | | SCALE .0100 |

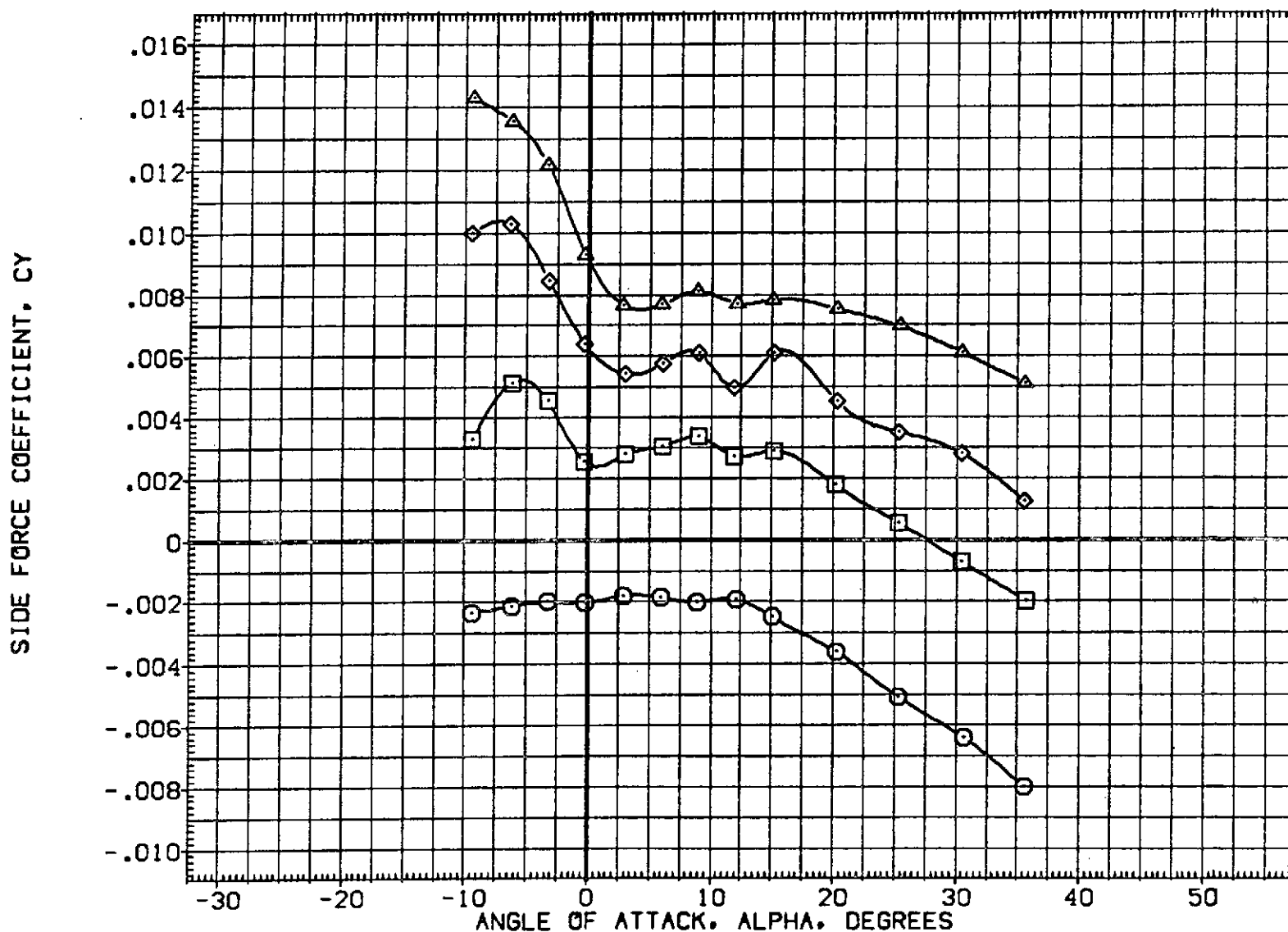


FIG. 16 COMPARISON OF N79,N49 AND N83 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHL014) | QA82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2650.0000 SQ.FT. |
| (RHL014) | QA82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 150.000 | 155.000 | 76.000 | 47.500 | LREF 474.8100 IN. |
| (RHL001) | QA82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | BREF 936.6800 IN. |
| (RHL016) | QA82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

AXIAL FORCE COEFFICIENT, CA

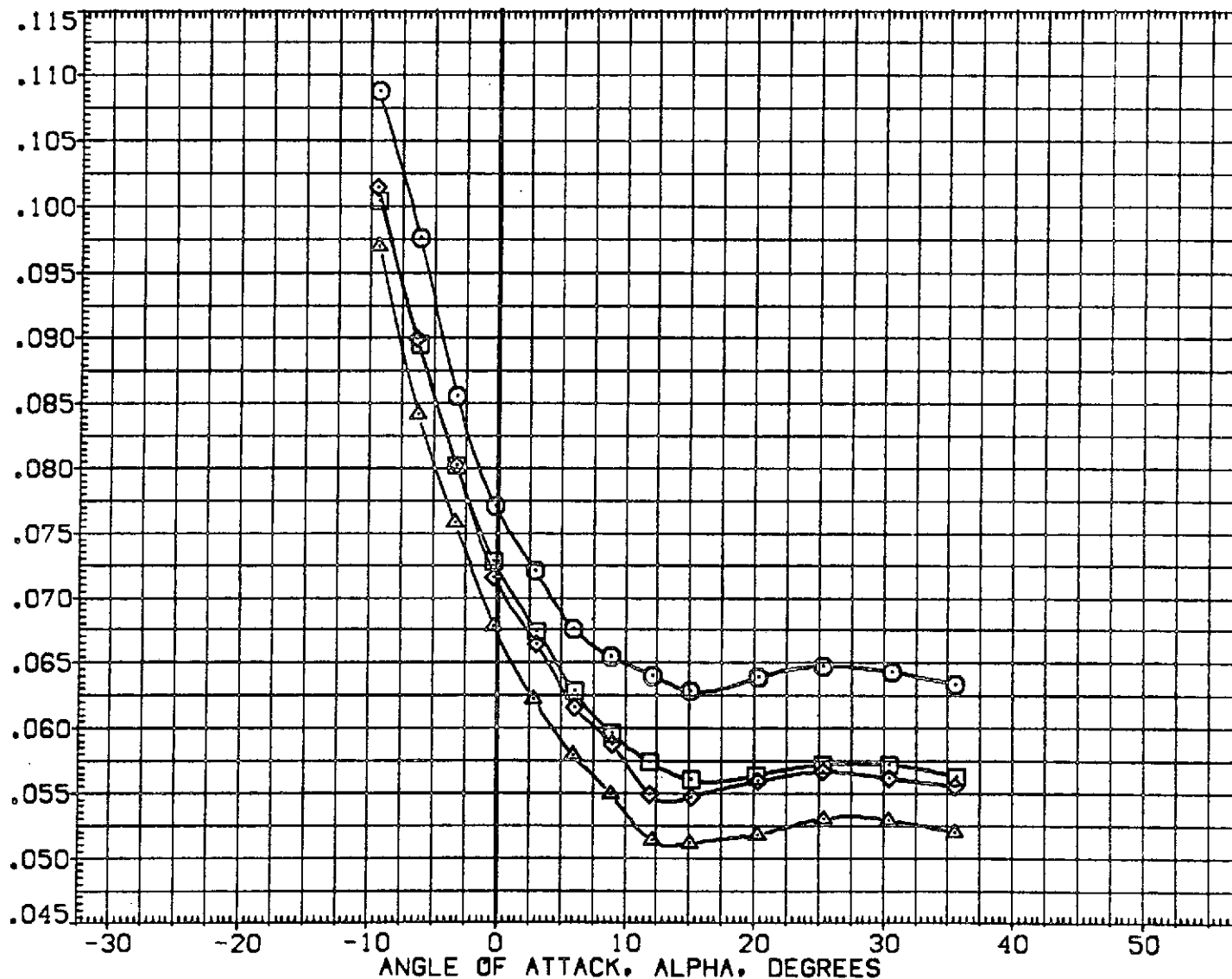


FIG. 16 COMPARISON OF N79,N49 AND N83 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|---------------------|---|
| (CHLC14) \square | OAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| (CHLC01) \square | OAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC16) \diamond | OAB2 CFHT113 MODEL 32-0 ORB V/N83 (AIR) |

| Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 76.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| 150.000 | 158.000 | 70.000 | 47.500 | BREF | 933.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

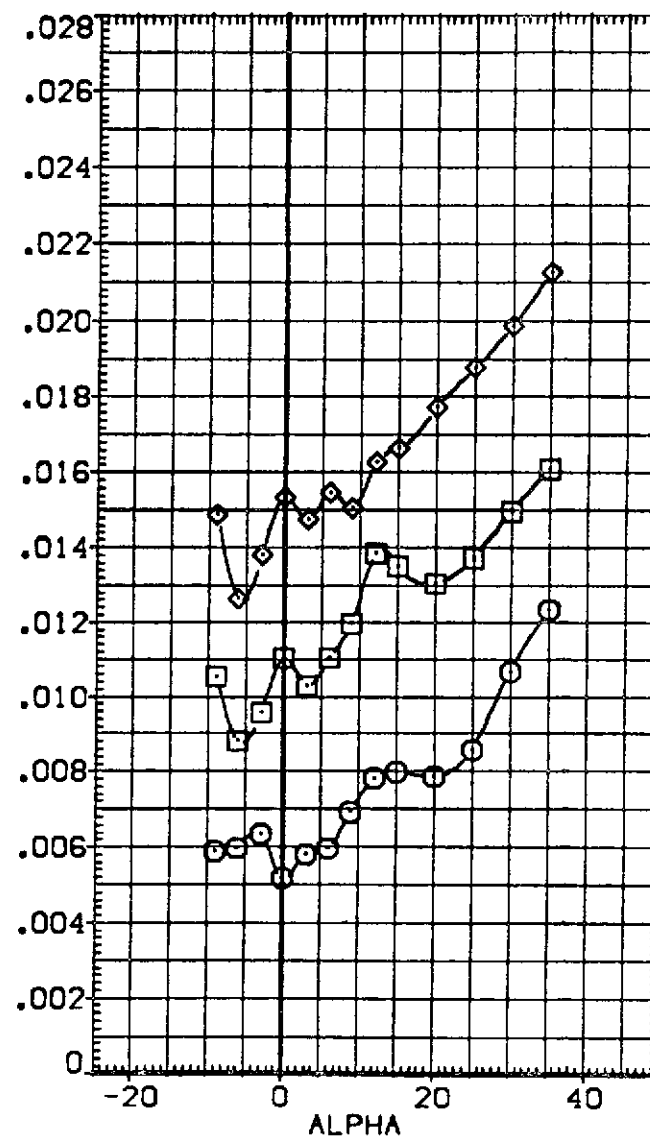
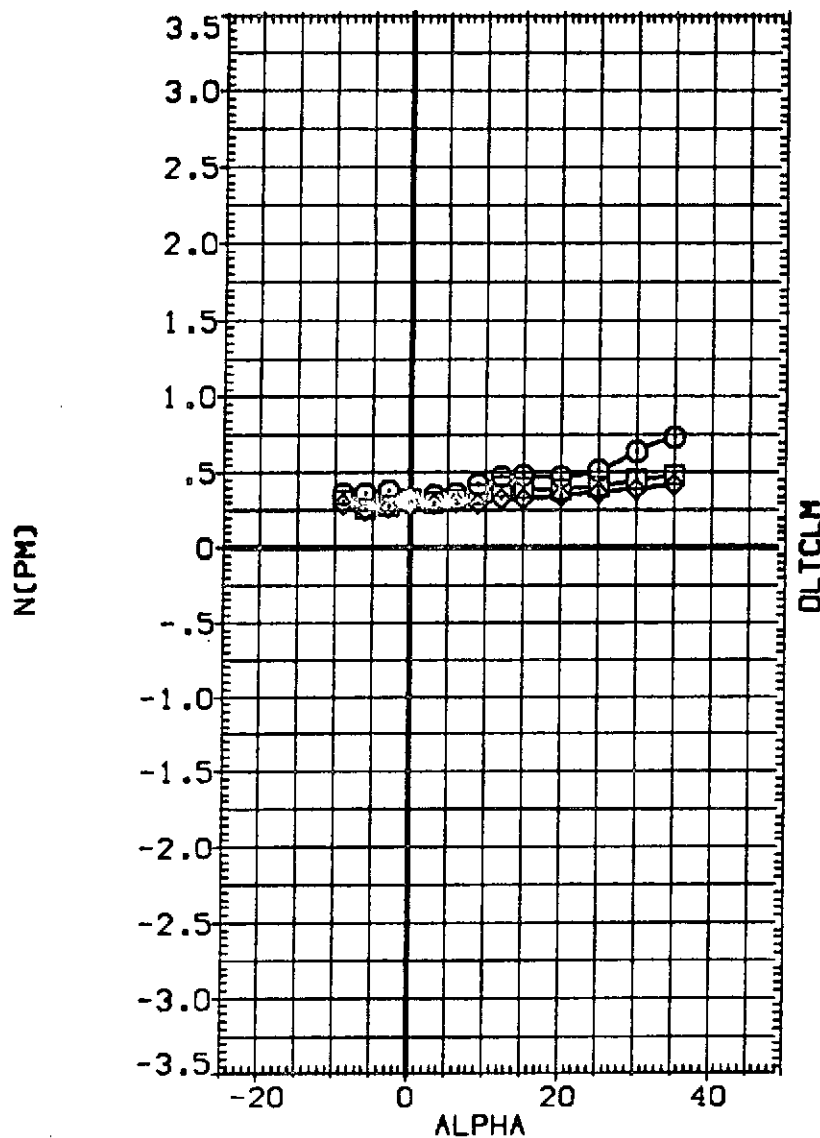


FIG. 16 COMPARISON OF N79, N49 AND N83 USING AIR AERO CHARACT IN PITCH
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC14] ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| [CHLC01] □ | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| [CHLC16] ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 76.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| 150.000 | 158.000 | 70.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

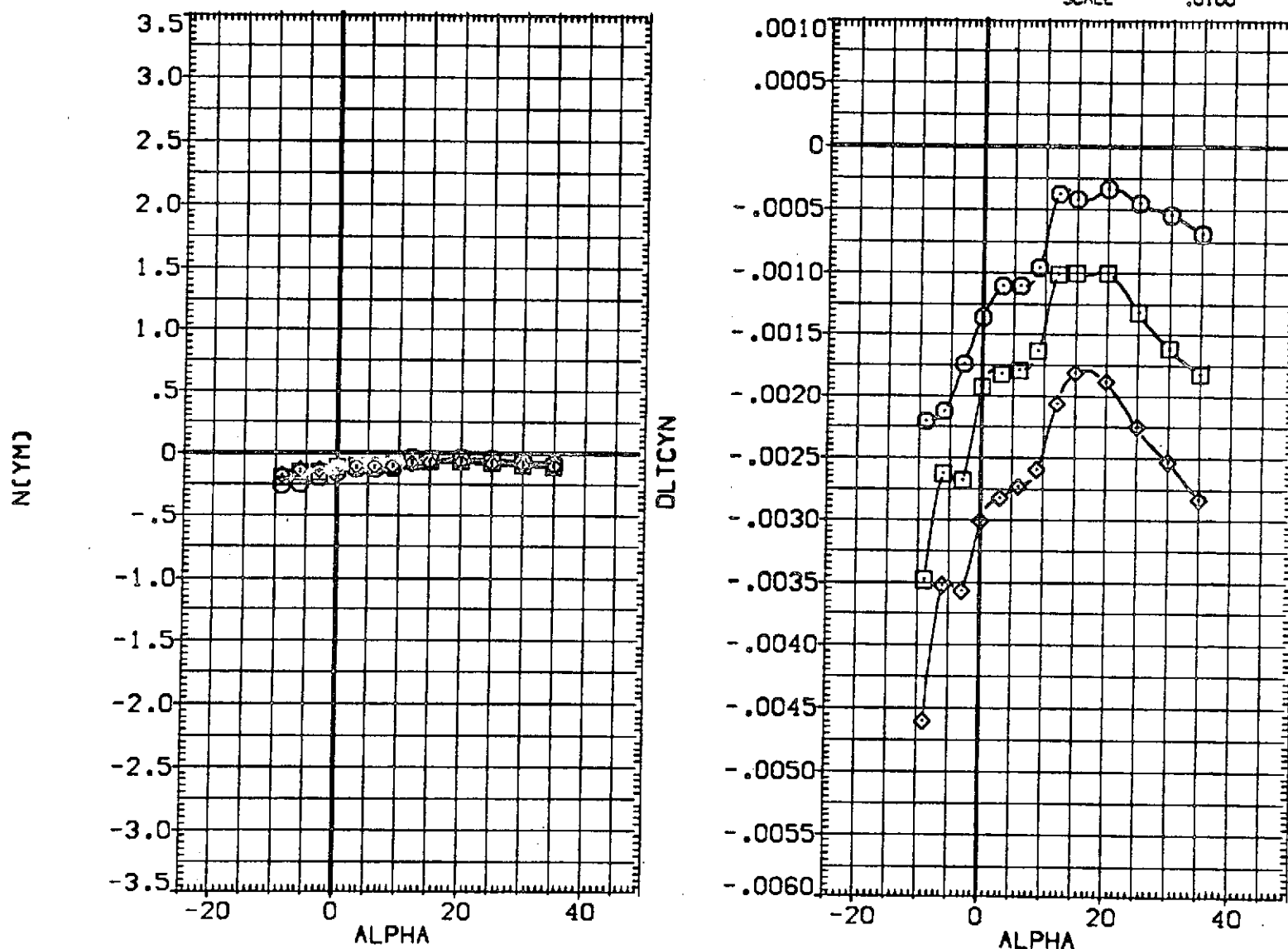


FIG. 16 COMPARISON OF N79, N49 AND N83 USING AIR AERO CHARACT IN PITCH

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC14) | 0A82 CFHT113 MODEL 32-0 OR8 W/N79 | (AIR) |
| (CHLC01) | 0A82 CFHT113 MODEL 32-0 OR8 W/N49 | (AIR) |
| (CHLC16) | 0A82 CFHT113 MODEL 32-0 OR8 W/N83 | (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 76.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 IN. |
| 150.000 | 158.000 | 70.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

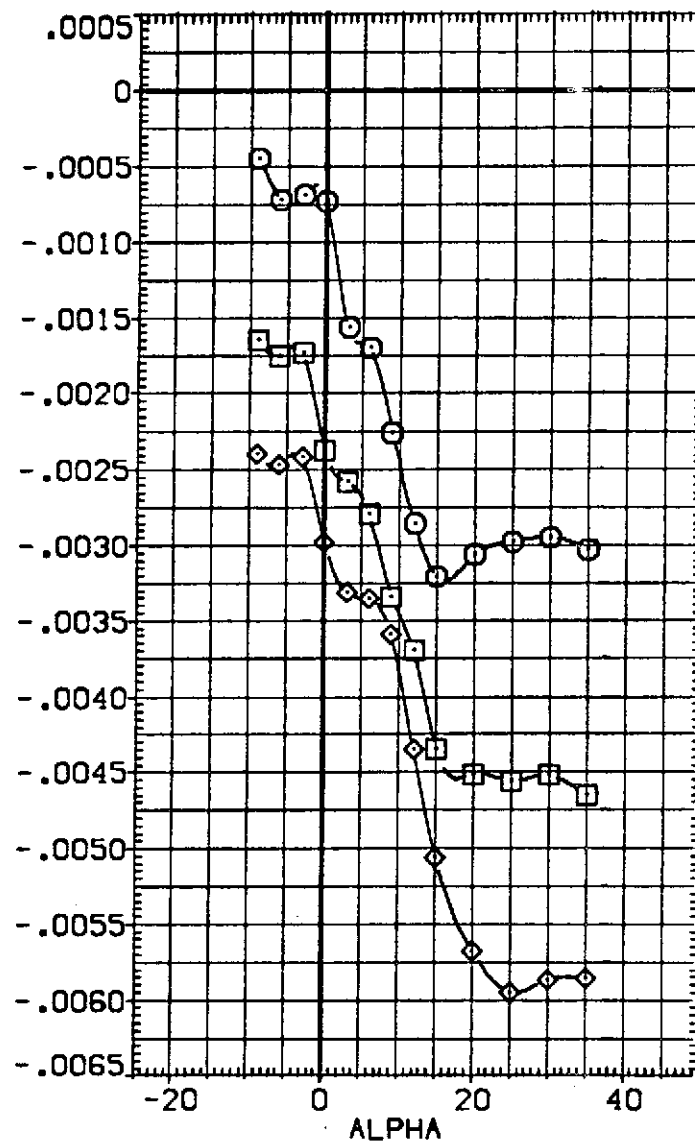
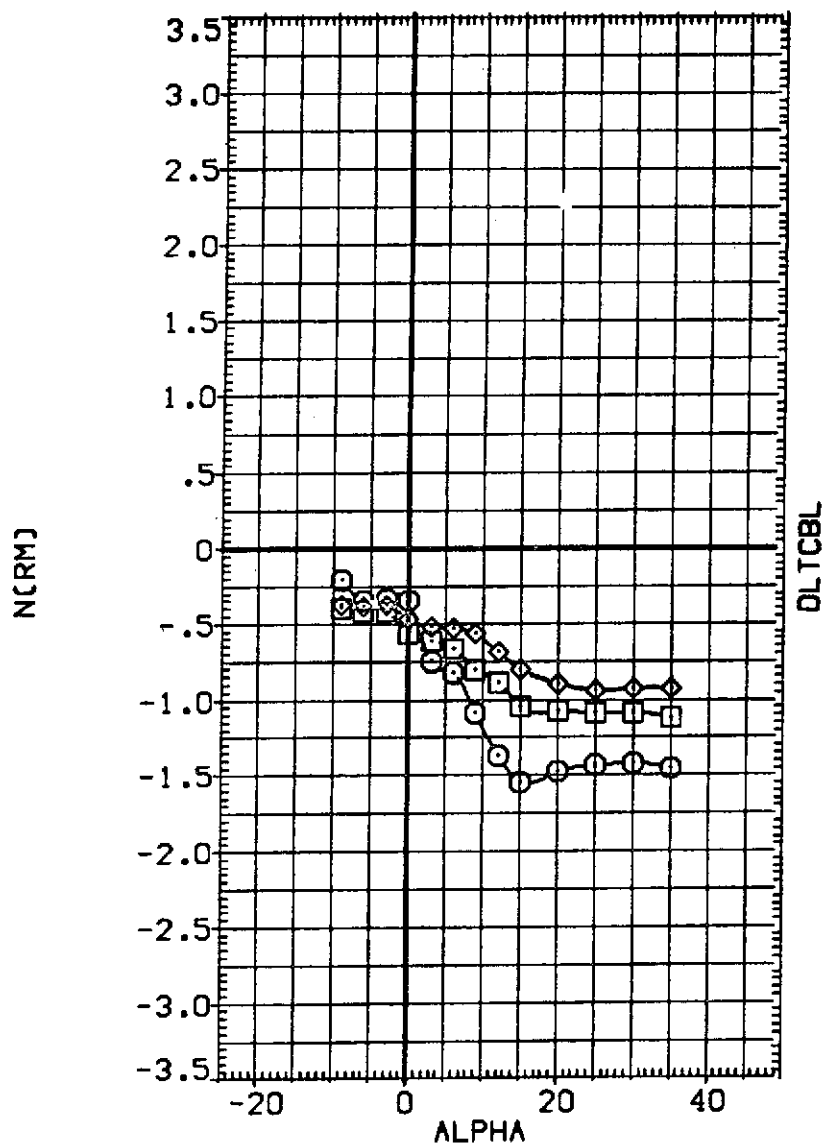


FIG. 16 COMPARISON OF N79, N49 AND N83 USING AIR AERO CHARACT IN PITCH

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC14) | 0A82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| (CHLC01) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC16) | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|--------|-----------------------|
| 150.000 | 155.000 | 76.000 | 47.500 | SREF 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 68.000 | 47.500 | LREF 474.8100 IN. |
| 150.000 | 158.000 | 70.000 | 47.500 | BREF 936.6800 IN. |
| | | | | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

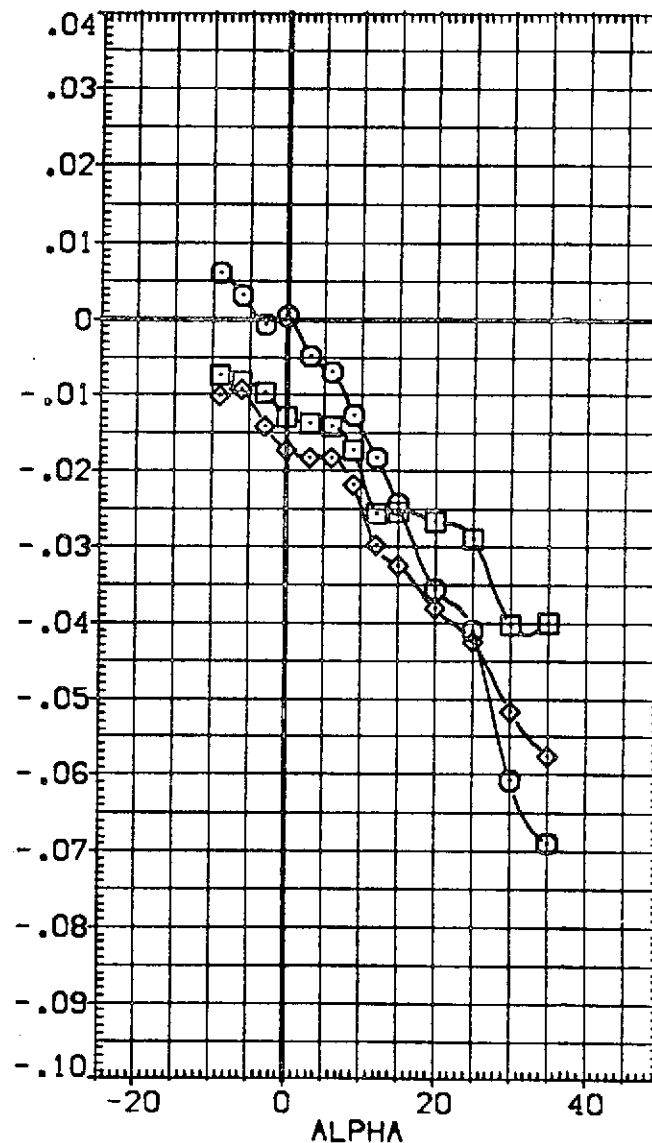
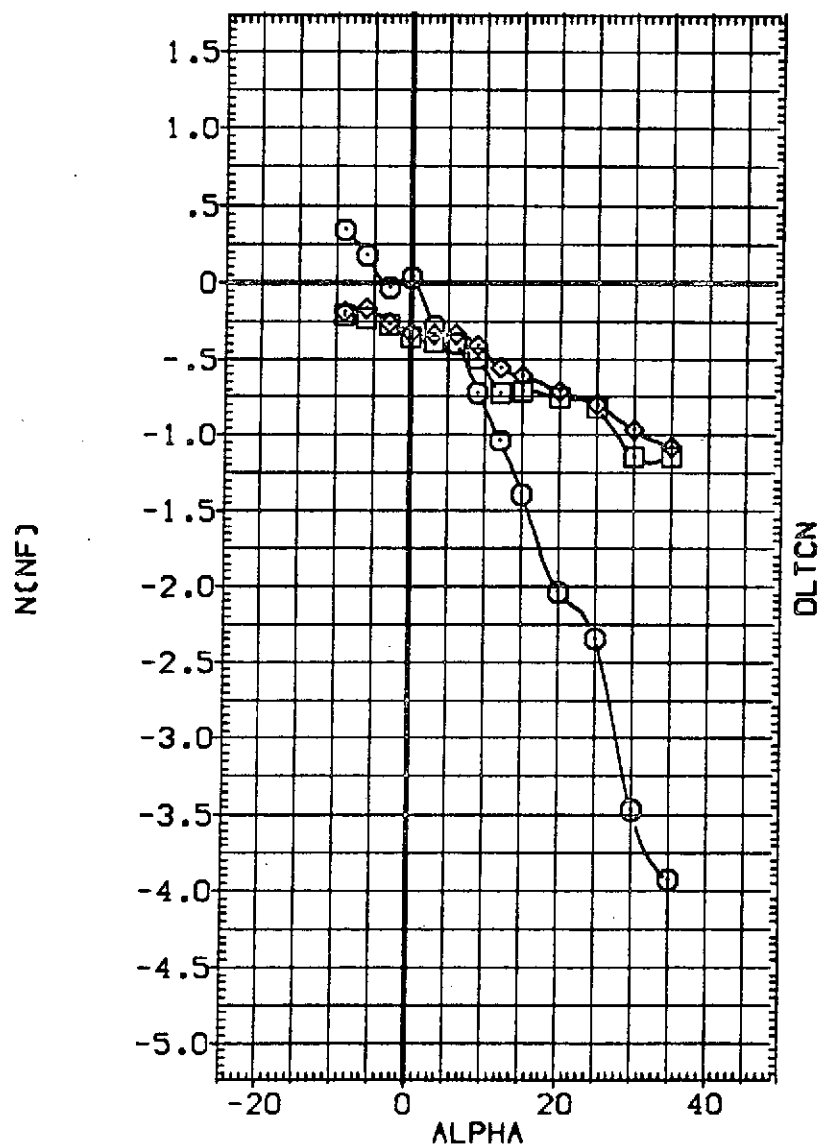


FIG. 16 COMPARISON OF N79, N49 AND N83 USING AIR AERO CHARACT IN PITCH

(A) MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

{CHLC14} ○ OA82 CFHT113 MODEL 32-0 DR8 V/N79 [AIR]
 {CHLC01} □ OA82 CFHT113 MODEL 32-0 DR8 V/N49 [AIR]
 {CHLC16} ◇ OA82 CFHT113 MODEL 32-0 DR8 V/N83 [AIR]

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|---------|
| 150.000 | 155.000 | 76.000 | 47.500 | SREF | 2650.0000 | 50. FT. |
| 150.000 | 155.000 | 68.000 | 47.500 | LREF | 474.8100 | IN. |
| 150.000 | 158.000 | 70.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

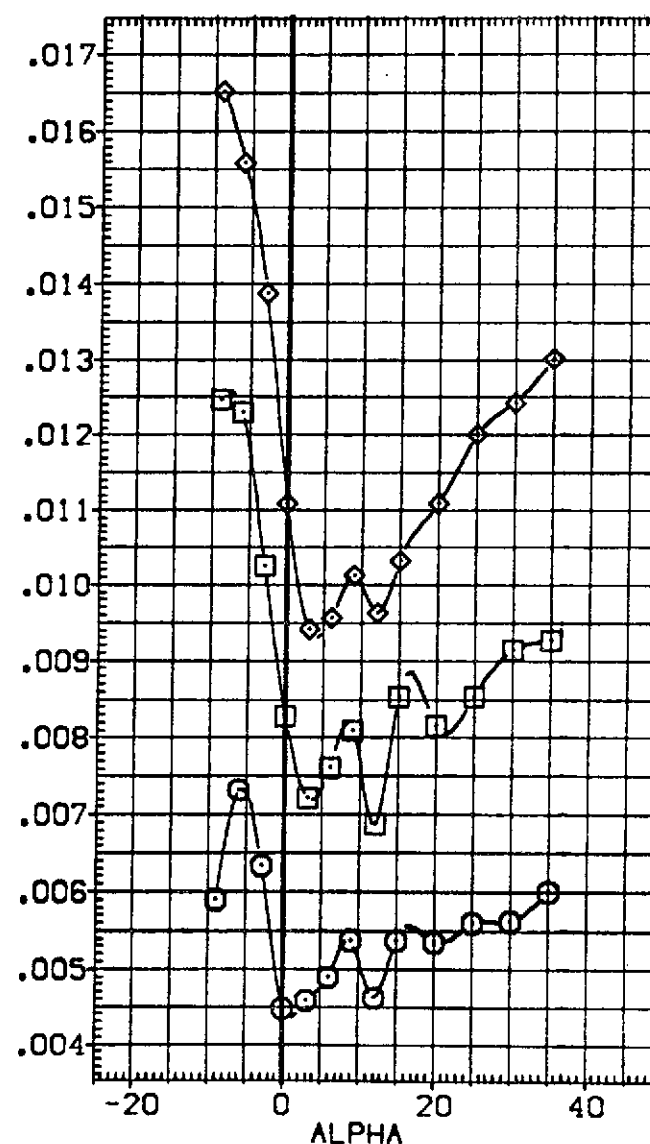
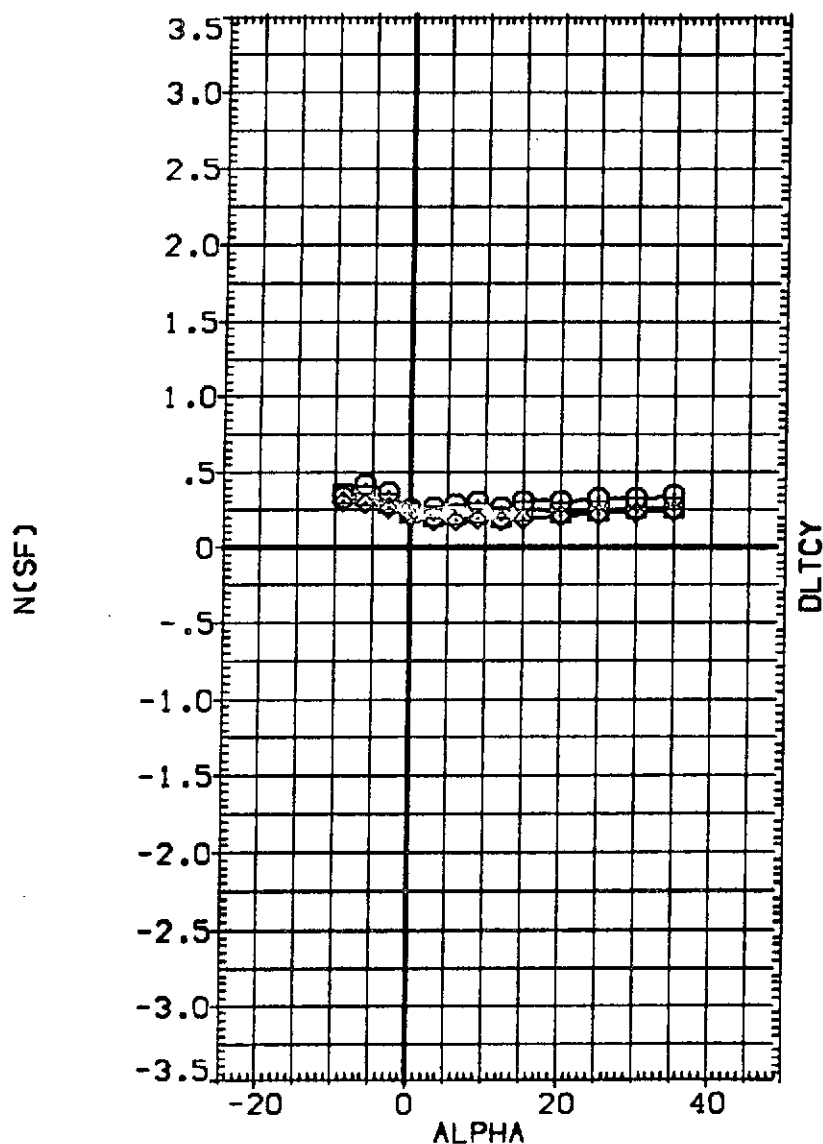


FIG. 16 COMPARISON OF N79,N49 AND N83 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL018) | 0A82 CFHT113 MODEL 32-0 ORB V/N78 [AIR] | 150.000 | 159.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] | 150.000 | 155.000 | 70.000 | 47.500 | BREF 936.6800 IN. |
| (RHL017) | 0A82 CFHT113 MODEL 32-0 ORB V/N82 [AIR] | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

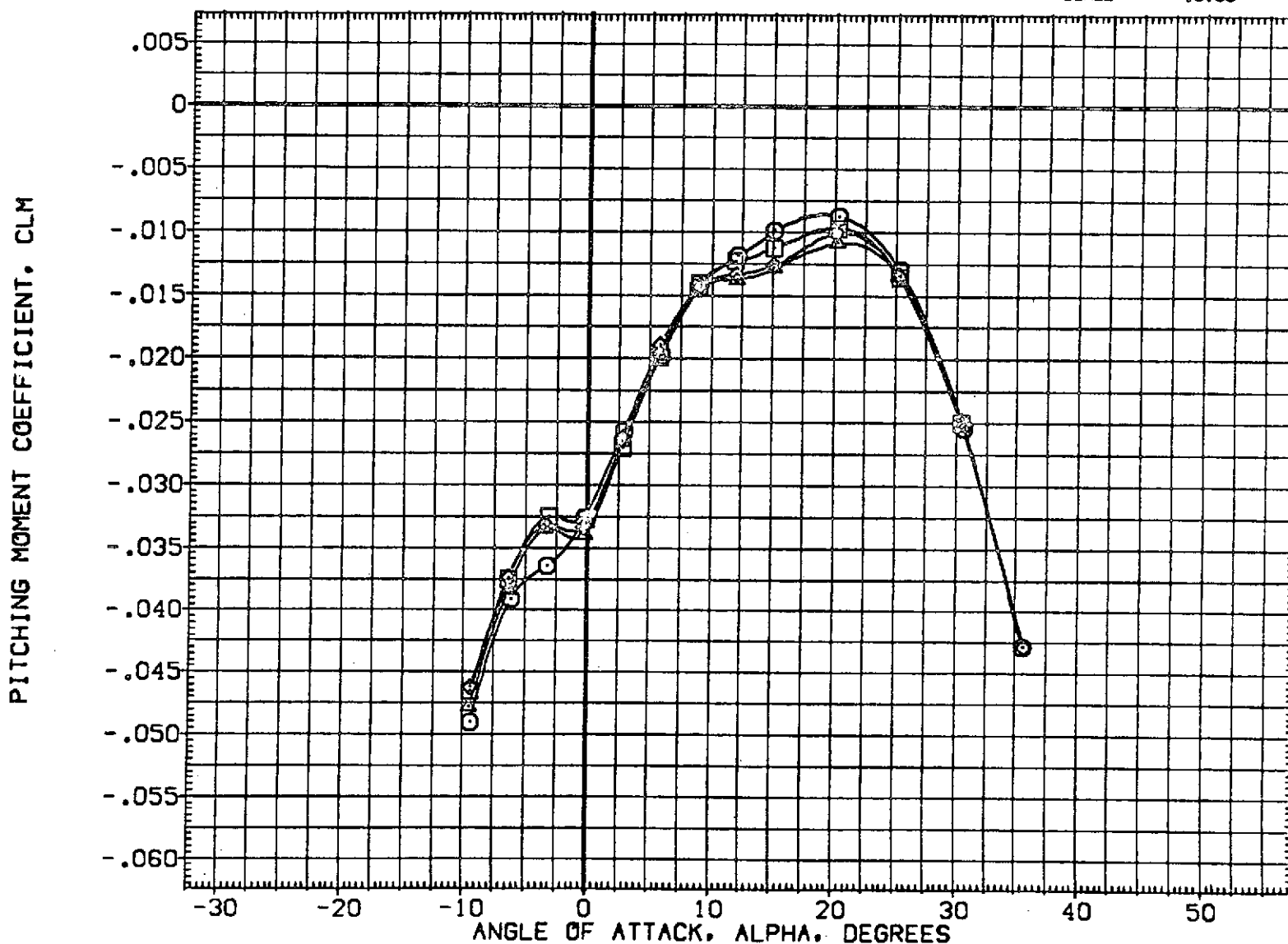


FIG. 17 COMPARISON OF N78,N52 AND N82 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL018) | 0A82 CFHT113 MODEL 32-0 ORB V/N78 [AIR] | 150.000 | 159.000 | 70.000 | 47.500 | LREF 474.9100 IN. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] | 150.000 | 155.000 | 70.000 | 47.500 | SREF 936.6800 IN. |
| (RHL017) | 0A82 CFHT113 MODEL 32-0 ORB V/N82 [AIR] | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

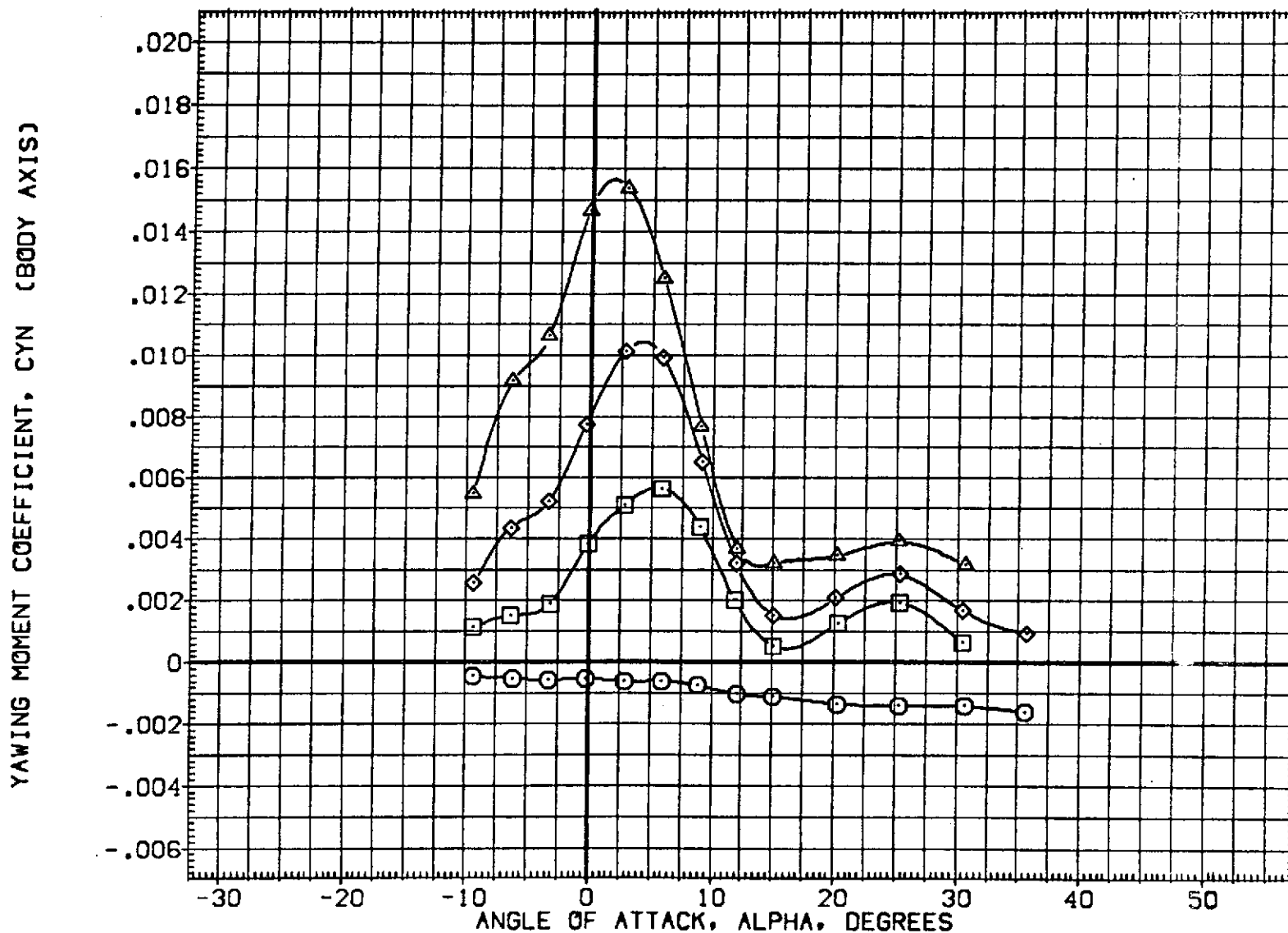


FIG. 17 COMPARISON OF N78,N52 AND N82 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL018) | QAB2 CFHT113 MODEL 32-0 ORB V/N78 (AIR) | 150.000 | 159.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | BREF 936.6800 IN. |
| (RHL017) | QAB2 CFHT113 MODEL 32-0 ORB V/N82 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

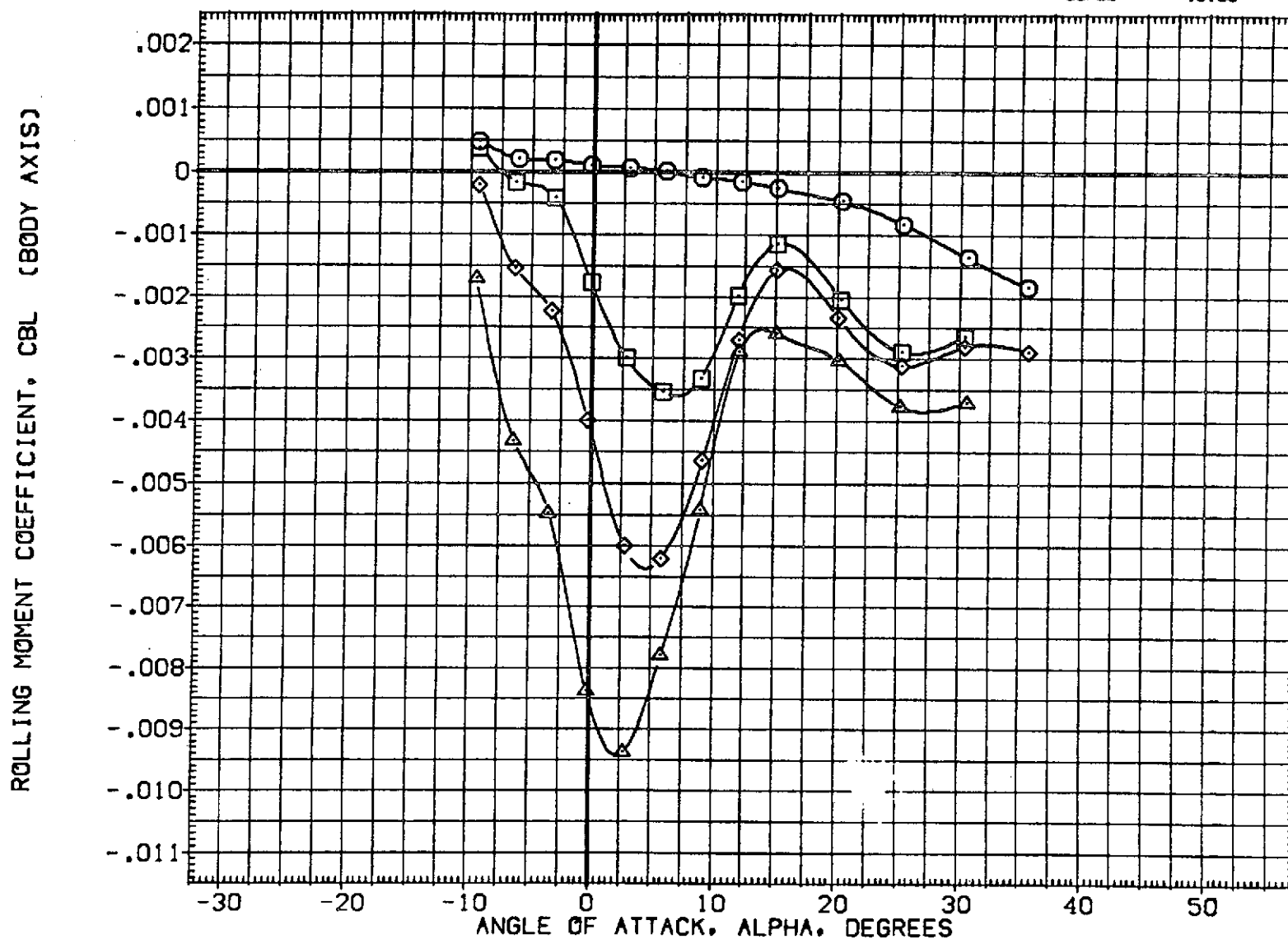


FIG. 17 COMPARISON OF N78,N52 AND N82 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q (PSF) | PC RCS | TC RCS | T/OA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|------------------|
| (RHL004) | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL018) | 0A82 CFHT113 MODEL 32-0 OR8 V/N78 | (AIR) | 150.000 | 159.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | BREF | 936.6800 IN. |
| (RHL017) | 0A82 CFHT113 MODEL 32-0 OR8 V/N82 | (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP | 1076.7000 IN. |
| | | | | | | | YMRP | .0000 IN. |
| | | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

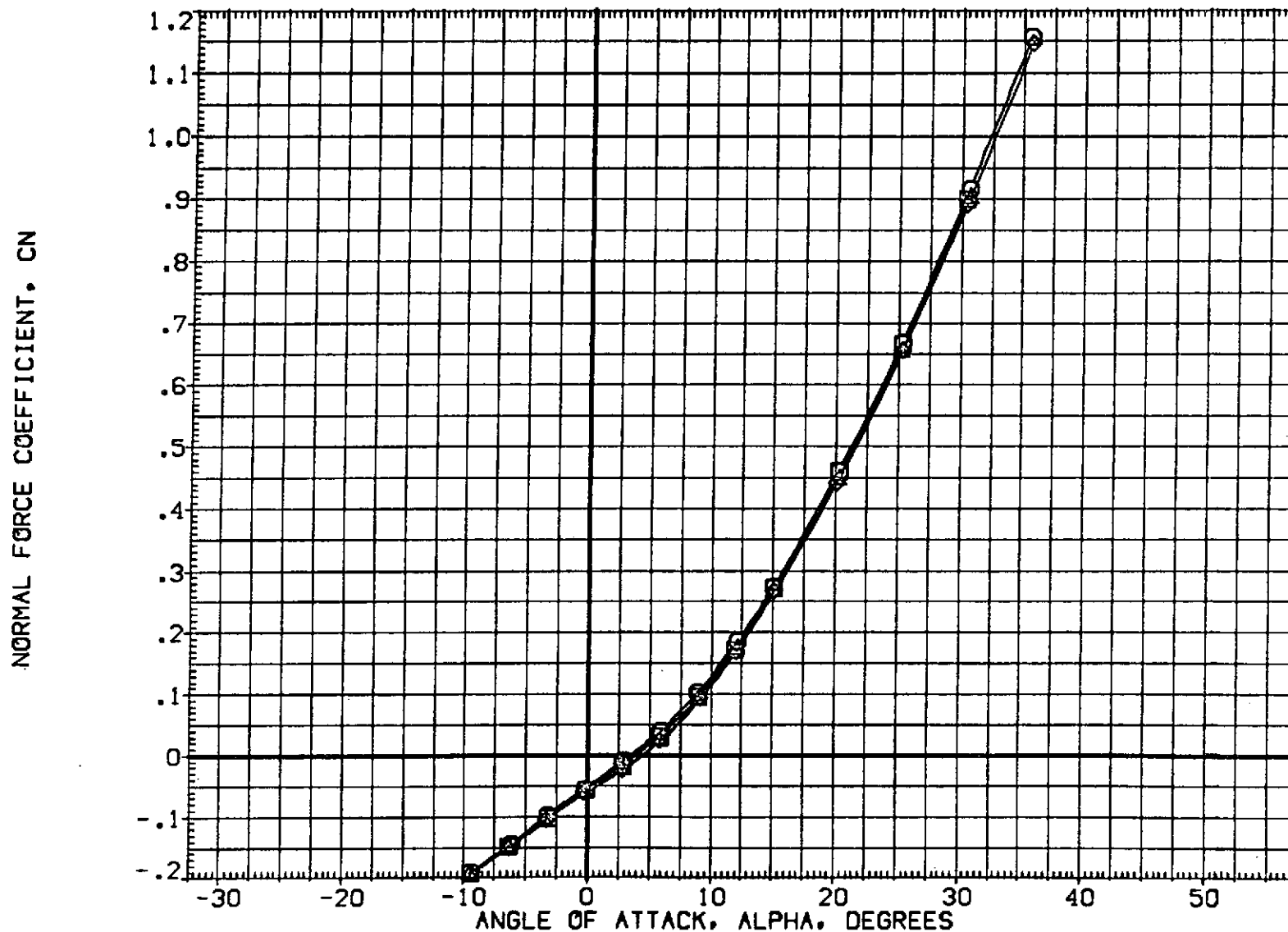


FIG. 17 COMPARISON OF N78,N52 AND N82 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/GA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (R4LF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (R4L018) | QAB2 CFHT113 MODEL 32-0 ORB V/N78 [AIR] | 150.000 | 159.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| (R4L009) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 [AIR] | 150.000 | 155.000 | 70.000 | 47.500 | BREF 936.6600 IN. |
| (R4L017) | QAB2 CFHT113 MODEL 32-0 ORB V/N82 [AIR] | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

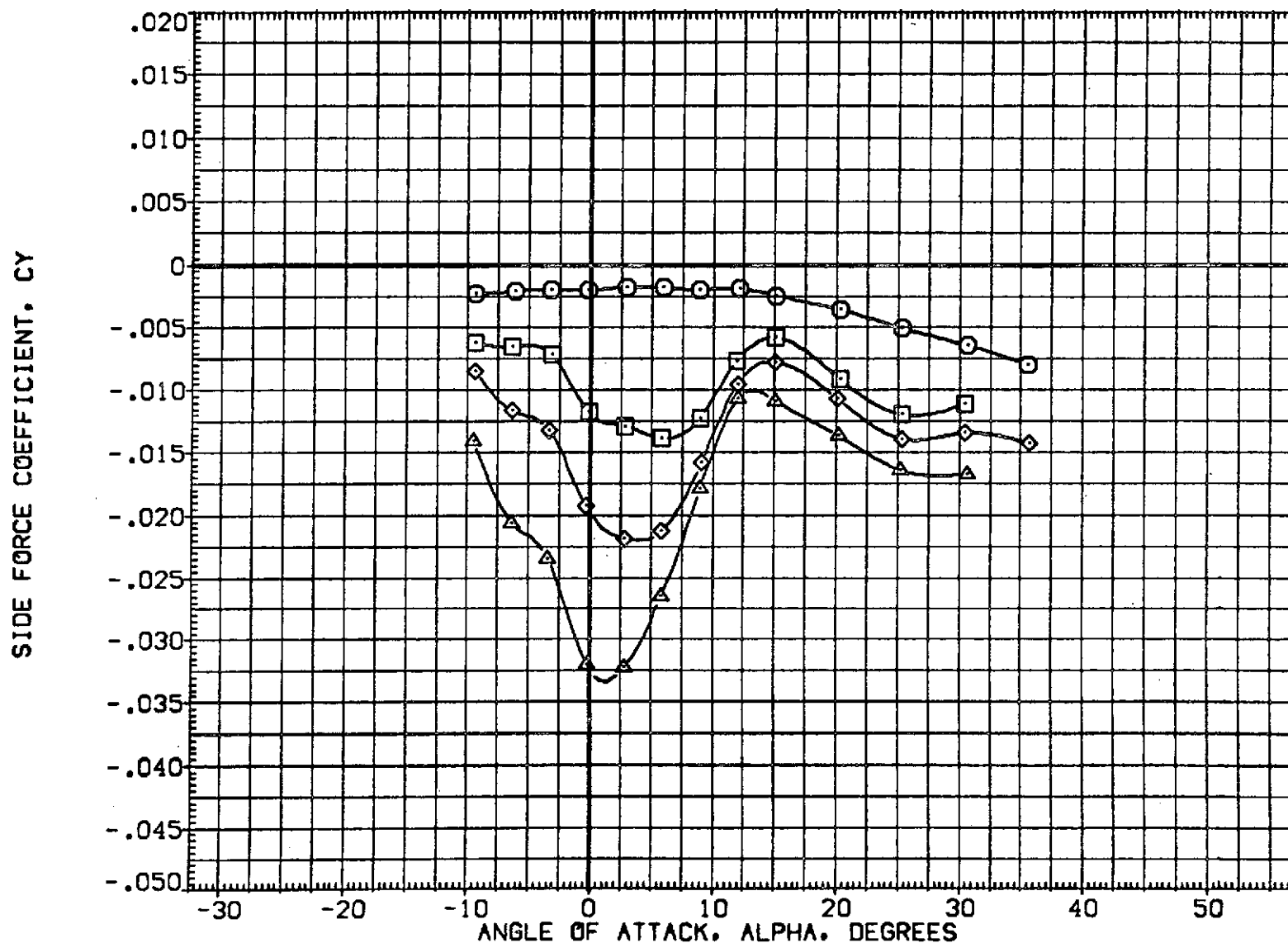


FIG. 17 COMPARISON OF N78, N52 AND N82 USING AIR AERO CHARACT IN PITCH

(A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|
| (RHL04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL018) | 0A82 CFHT113 MODEL 32-0 ORB V/N78 | 150.000 | 159.000 | 70.000 | 47.500 | LREF 474.8100 IN. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | 150.000 | 155.000 | 70.000 | 47.500 | BREF 936.6900 IN. |
| (RHL017) | 0A82 CFHT113 MODEL 32-0 ORB V/N82 | 150.000 | 156.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

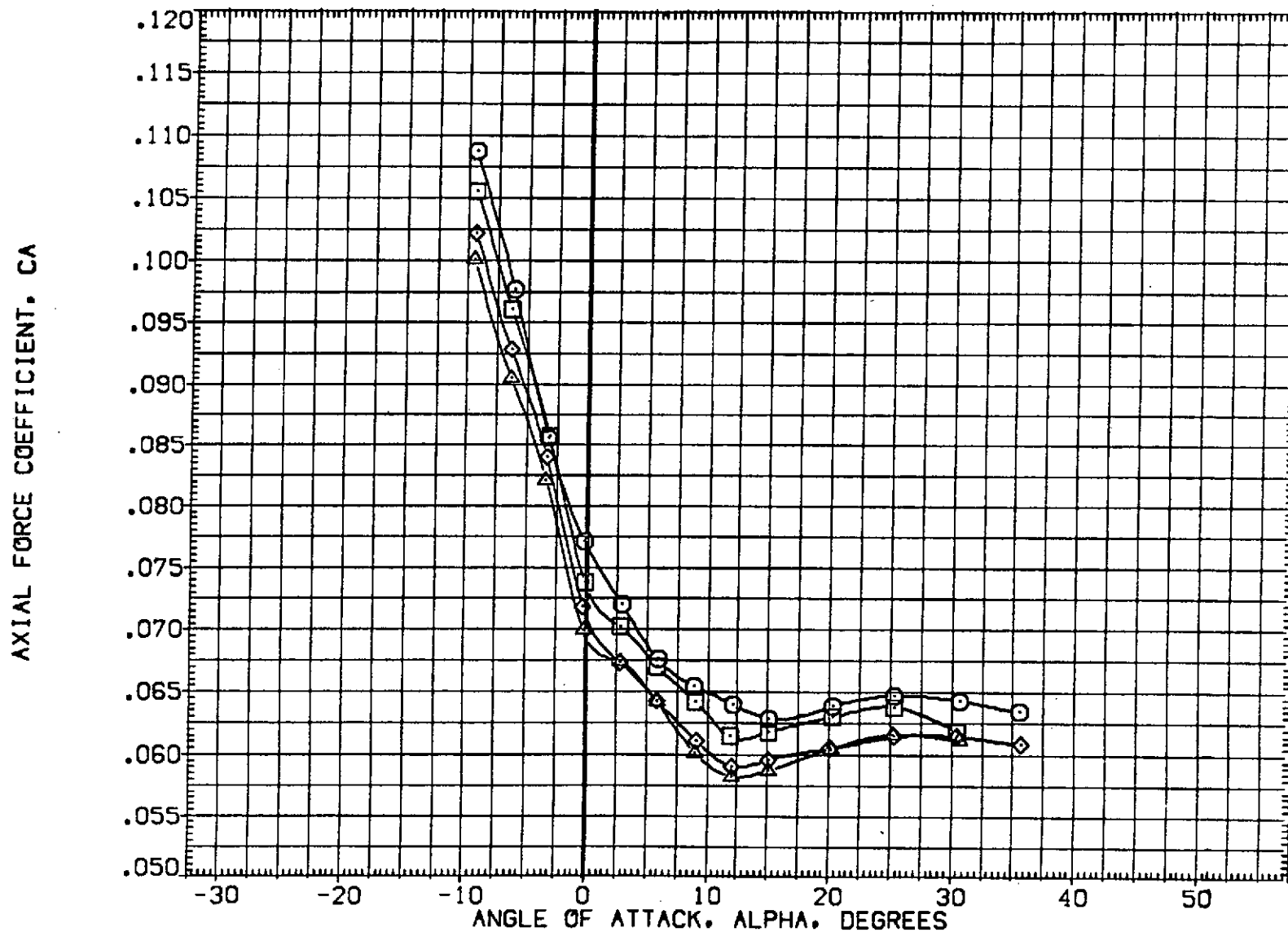


FIG. 17 COMPARISON OF N78,N52 AND N82 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC18] ○ | 0A82 CFHT113 MODEL 32-0 DRB V/N78 (AIR) |
| [CHLC09] ○ | 0A82 CFHT113 MODEL 32-0 DRB V/N52 (AIR) |
| [CHLC17] ◇ | 0A82 CFHT113 MODEL 32-0 DRB V/N82 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 159.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| 150.000 | 158.000 | 70.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

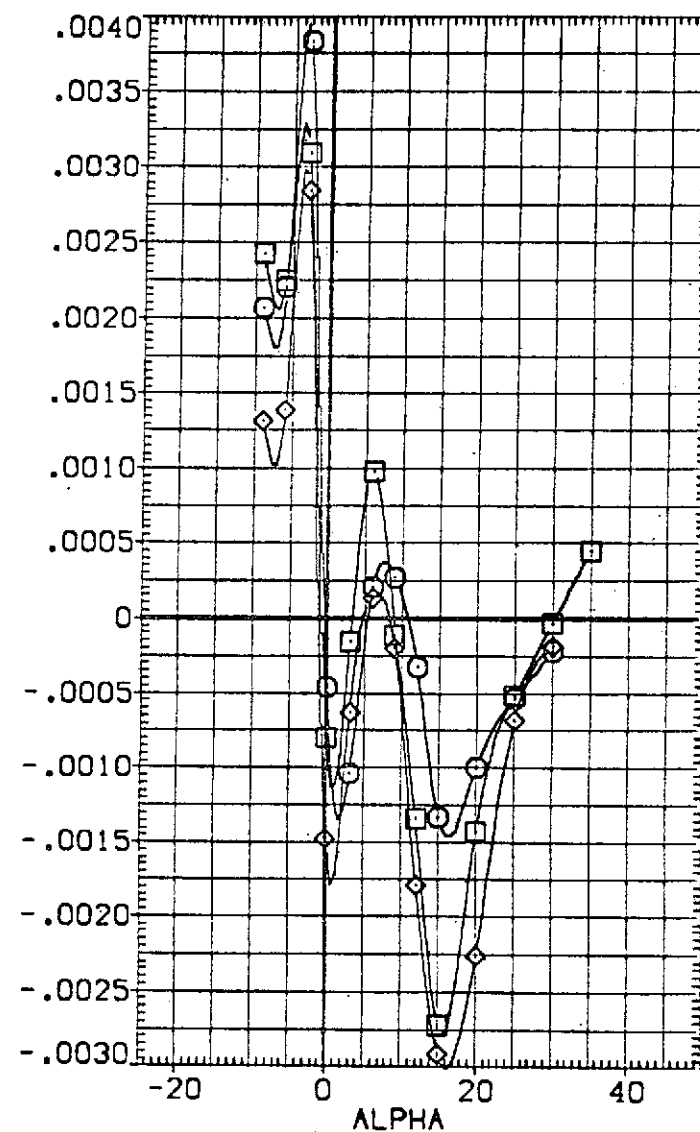
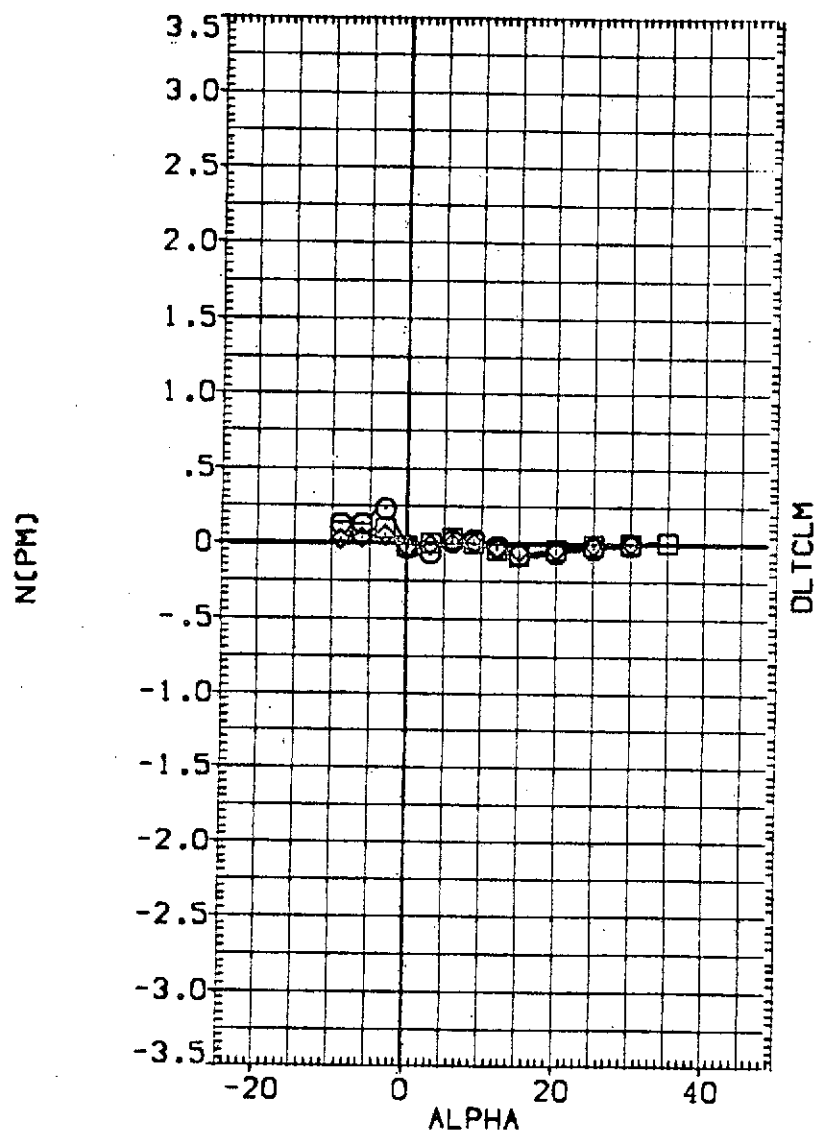


FIG. 17 COMPARISON OF N78, N52 AND N82 USING AIR AERO CHARACT IN PITCH
(A) MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

| | | | |
|----------|---|-----------------------------------|-------|
| (CHLC18) | ○ | 0A82 CFHT113 MODEL 32-0 CR8 V/N78 | (AIR) |
| (CHLC09) | □ | 0A82 CFHT113 MODEL 32-0 CR8 V/N52 | (AIR) |
| (CHLC17) | ◇ | 0A82 CFHT113 MODEL 32-0 CR8 V/N82 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 159.000 | 70.000 | 47.500 | SREF | 2690.0000 | 90.FT. |
| 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 | IN. |
| 150.000 | 158.000 | 70.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

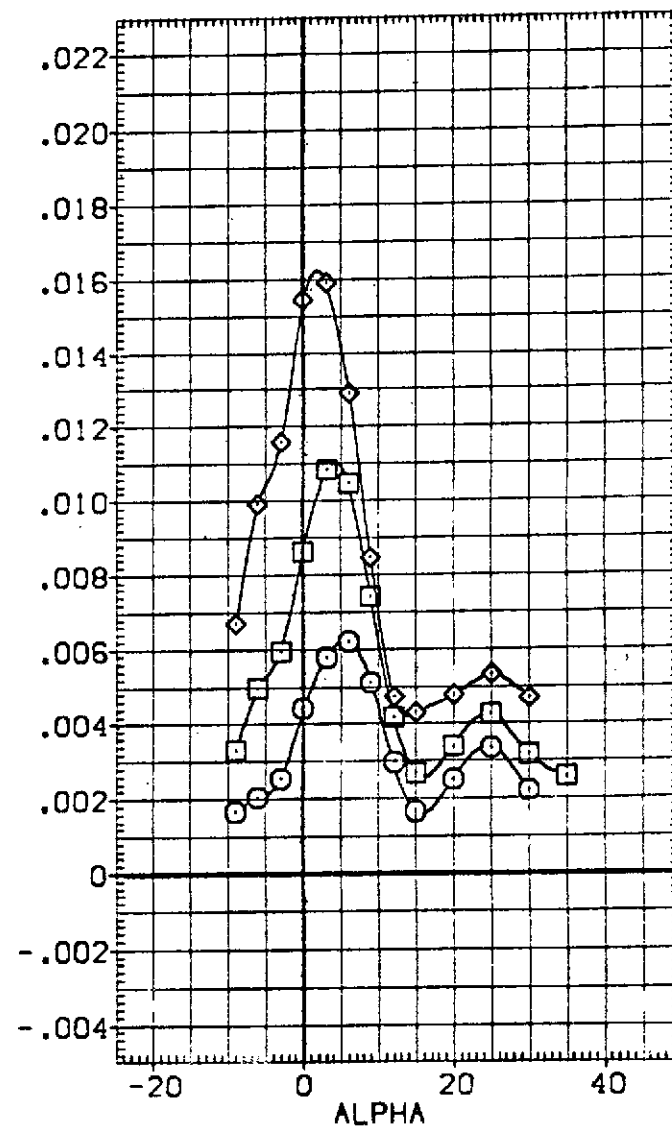
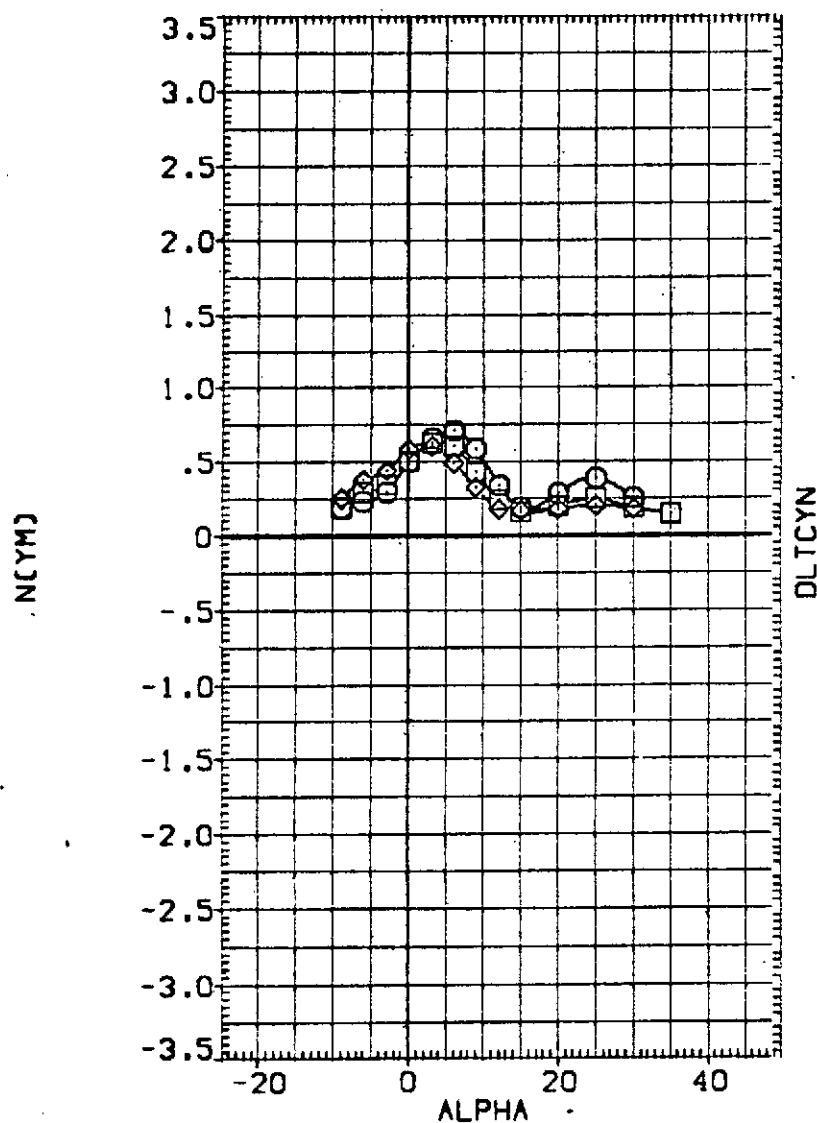


FIG. 17 COMPARISON OF N78, N52 AND N82 USING AIR AERO CHARACTERISTICS IN PITCH
(A) MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

[CHLC18] □ OA82 CFHT113 MODEL 32-0 ORB V/N78 (AIR)
 [CHLC09] □ OA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR)
 [CHLC17] ◇ OA82 CFHT113 MODEL 32-0 ORB V/N82 (AIR)

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150,000 | 159,000 | 70,000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150,000 | 155,000 | 70,000 | 47.500 | LREF | 474.8100 IN. |
| 150,000 | 158,000 | 70,000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

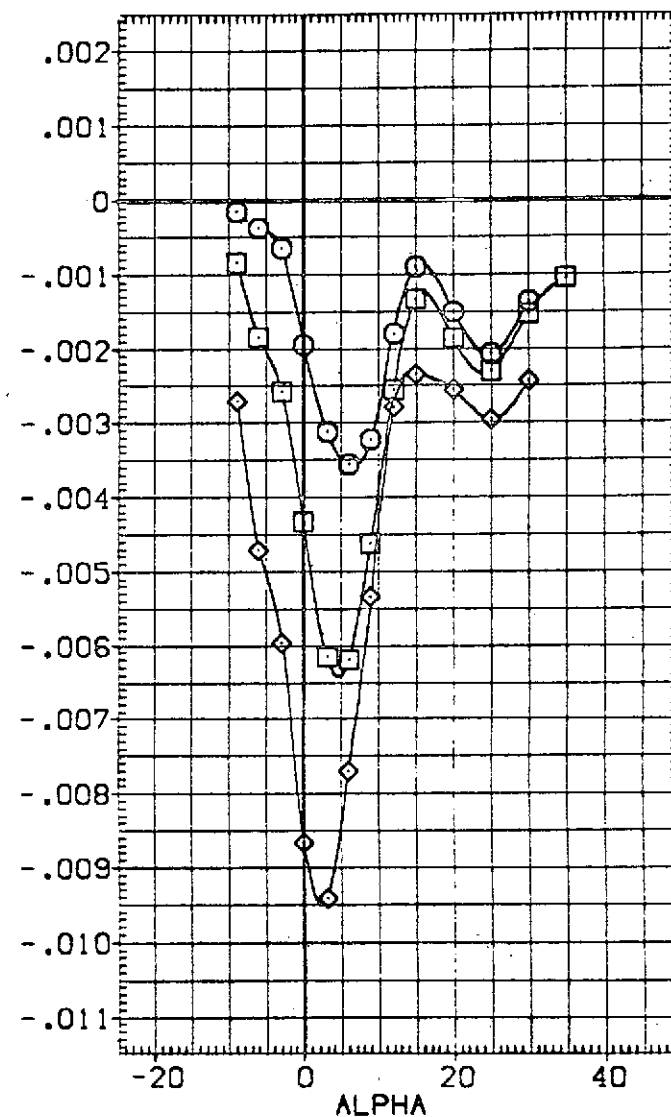
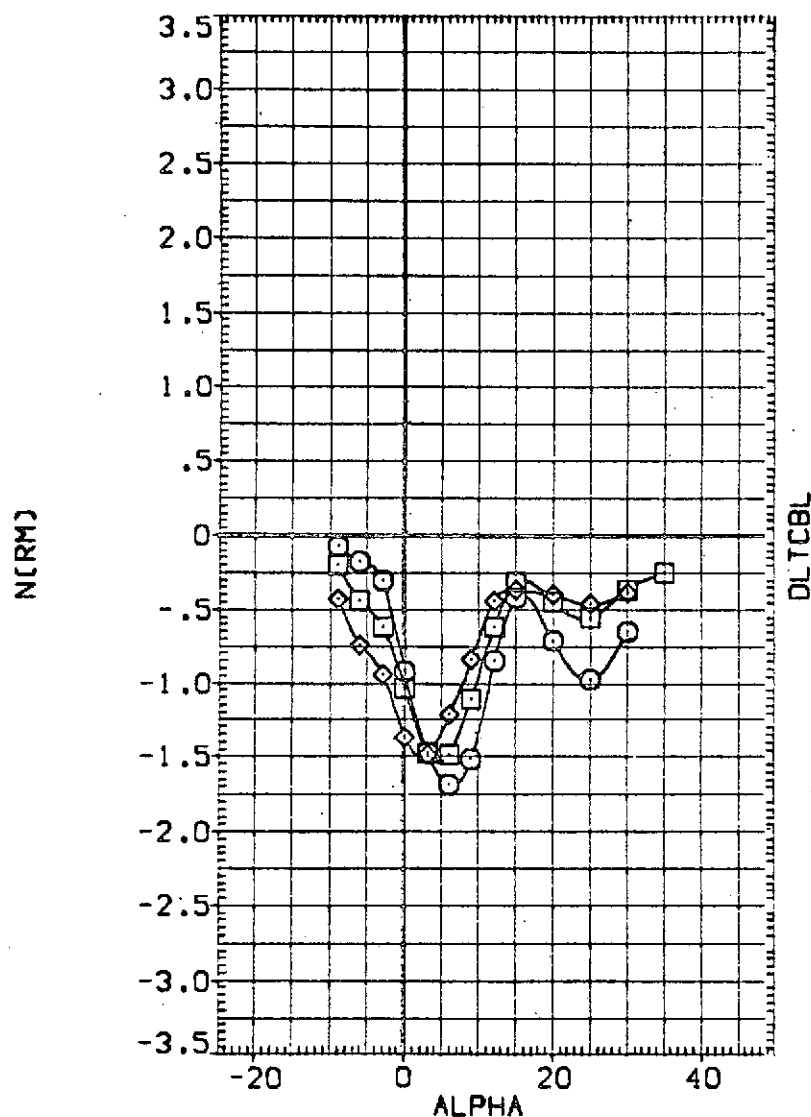


FIG. 17 COMPARISON OF N78, N52 AND N82 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC18) | 0A82 CFHT113 MODEL 32-0 DRB V/N78 | (AIR) |
| (CHLC09) | 0A82 CFHT113 MODEL 32-0 DRB V/N52 | (AIR) |
| (CHLC17) | 0A82 CFHT113 MODEL 32-0 DRB V/N82 | (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 159.000 | 70.000 | 47.500 | OREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| 150.000 | 159.000 | 70.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

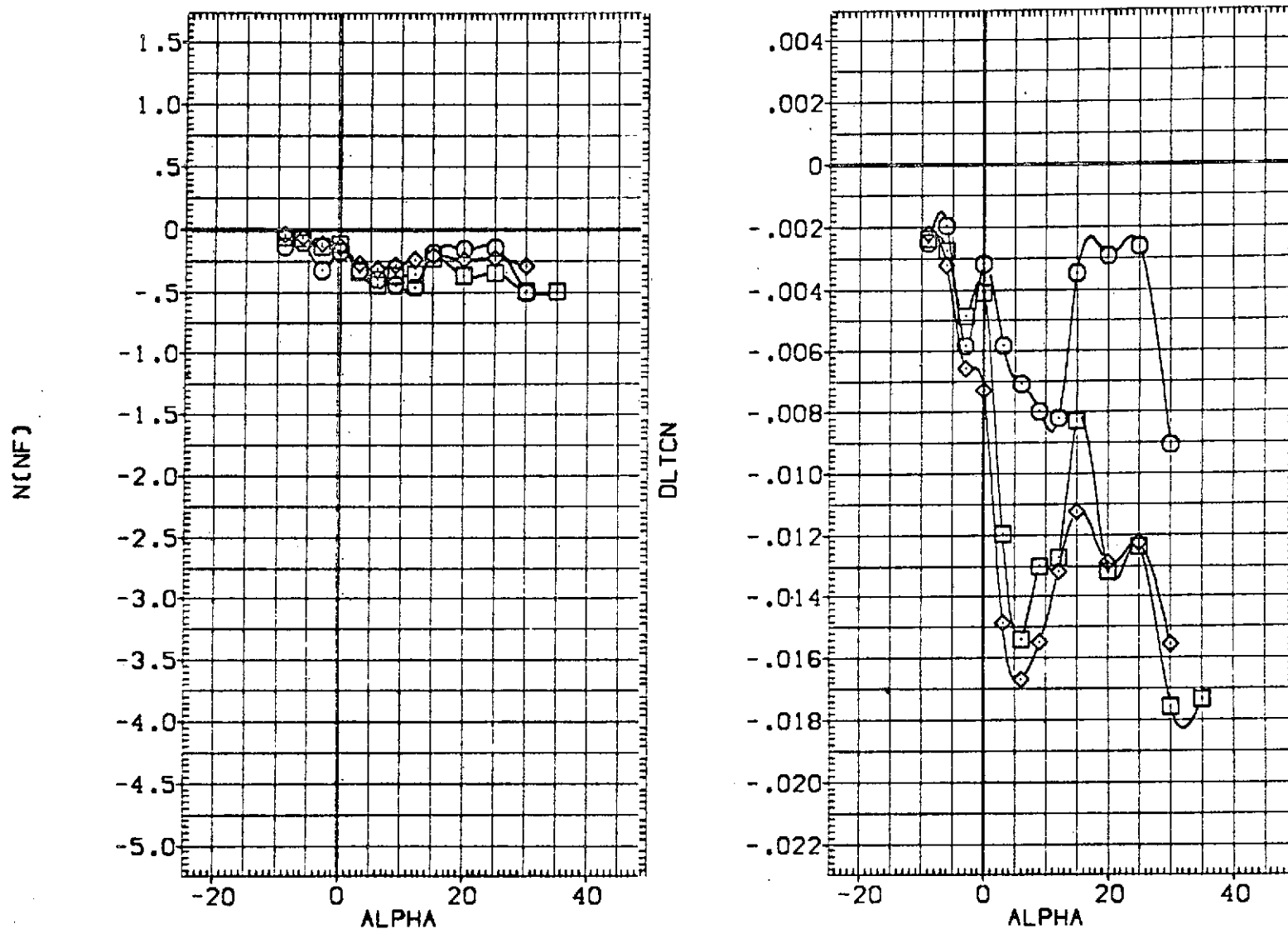


FIG. 17 COMPARISON OF N78,N52 AND N82 USING AIR AERO CHARACT IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC18) | 0A82 CFHT113 MODEL 32-0 OR8 V/N78 | [AIR] |
| (CHLC09) | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | [AIR] |
| (CHLC17) | 0A82 CFHT113 MODEL 32-0 OR8 V/N82 | [AIR] |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 159.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 155.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| 150.000 | 158.000 | 70.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

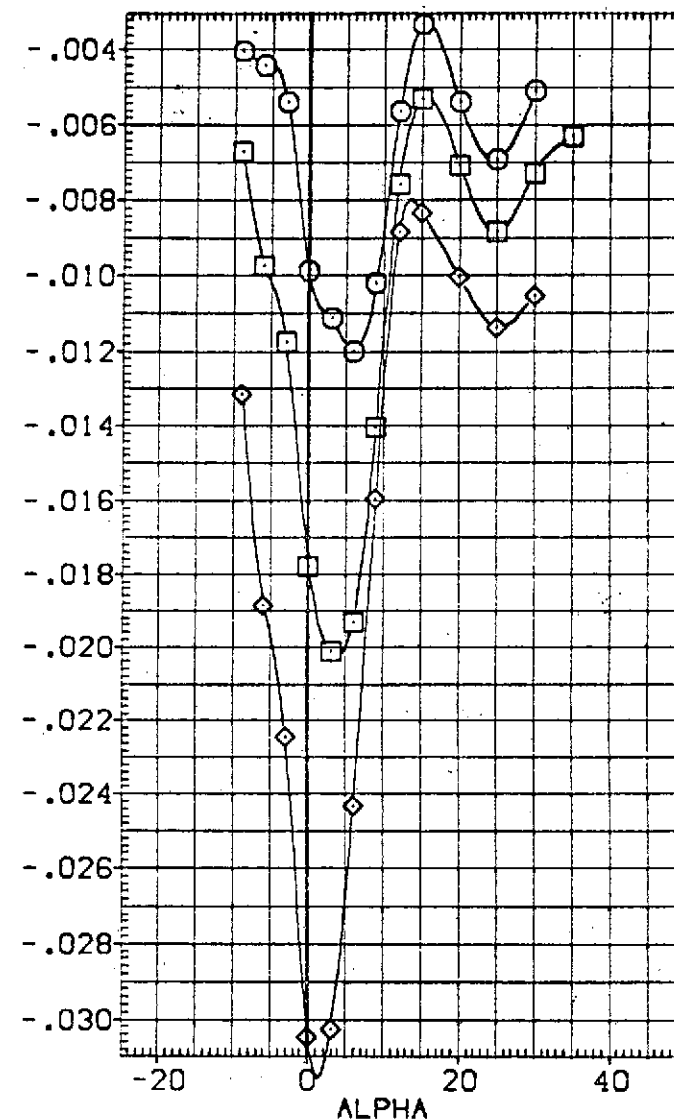
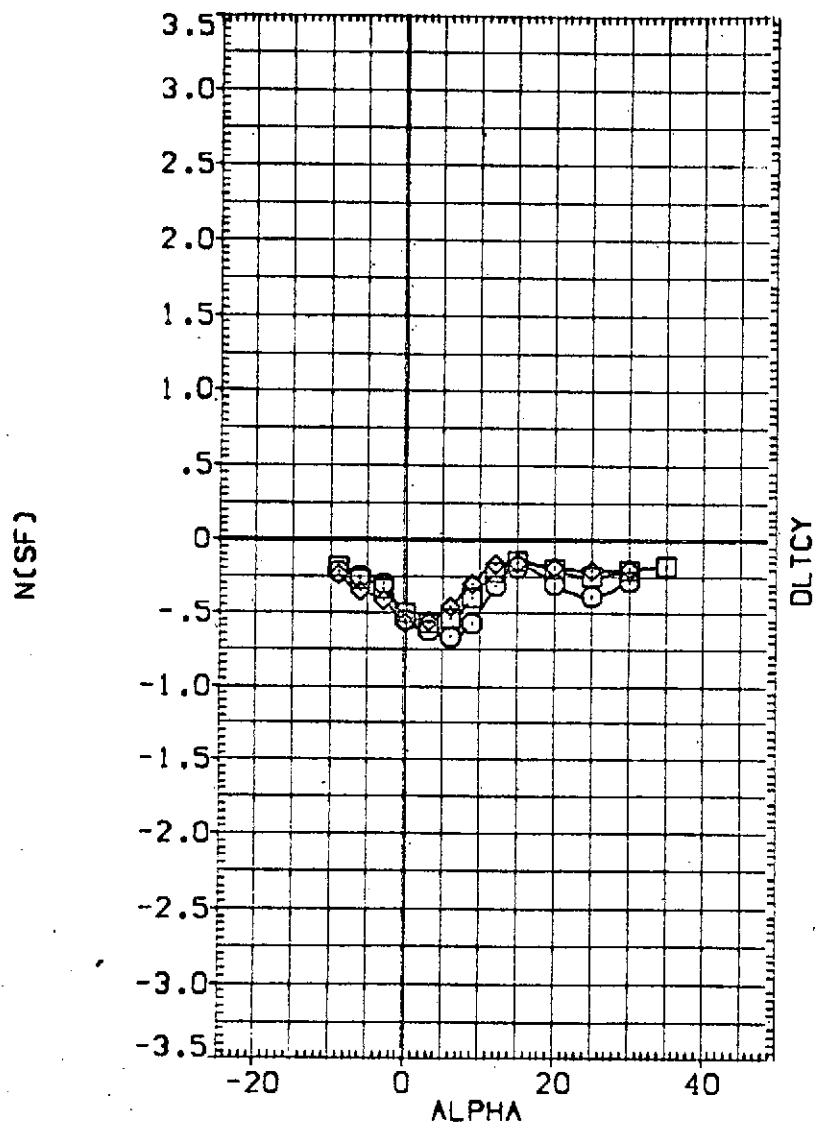


FIG. 17 COMPARISON OF N78, N52 AND N82 USING AIR AERO CHARACT IN PITCH
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCND | TCR3 | T/BA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|--------|------------------------|
| (RHL004) | 0A02 CFHT113 MODEL 32-3 ORB V/NGS | 150.000 | .000 | .000 | .000 | SREF 2060.0000 29. FT. |
| (RHL011) | 0A02 CFHT113 MODEL 32-0 ORB V/NGS | 150.000 | 159.000 | 70.000 | 47.500 | LREF 474.0100 IN. |
| (RHL015) | 0A02 CFHT113 MODEL 32-0 ORB V/NS1 | 150.000 | 176.000 | 70.000 | 47.500 | BREF 933.6900 IN. |
| | | | | | | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

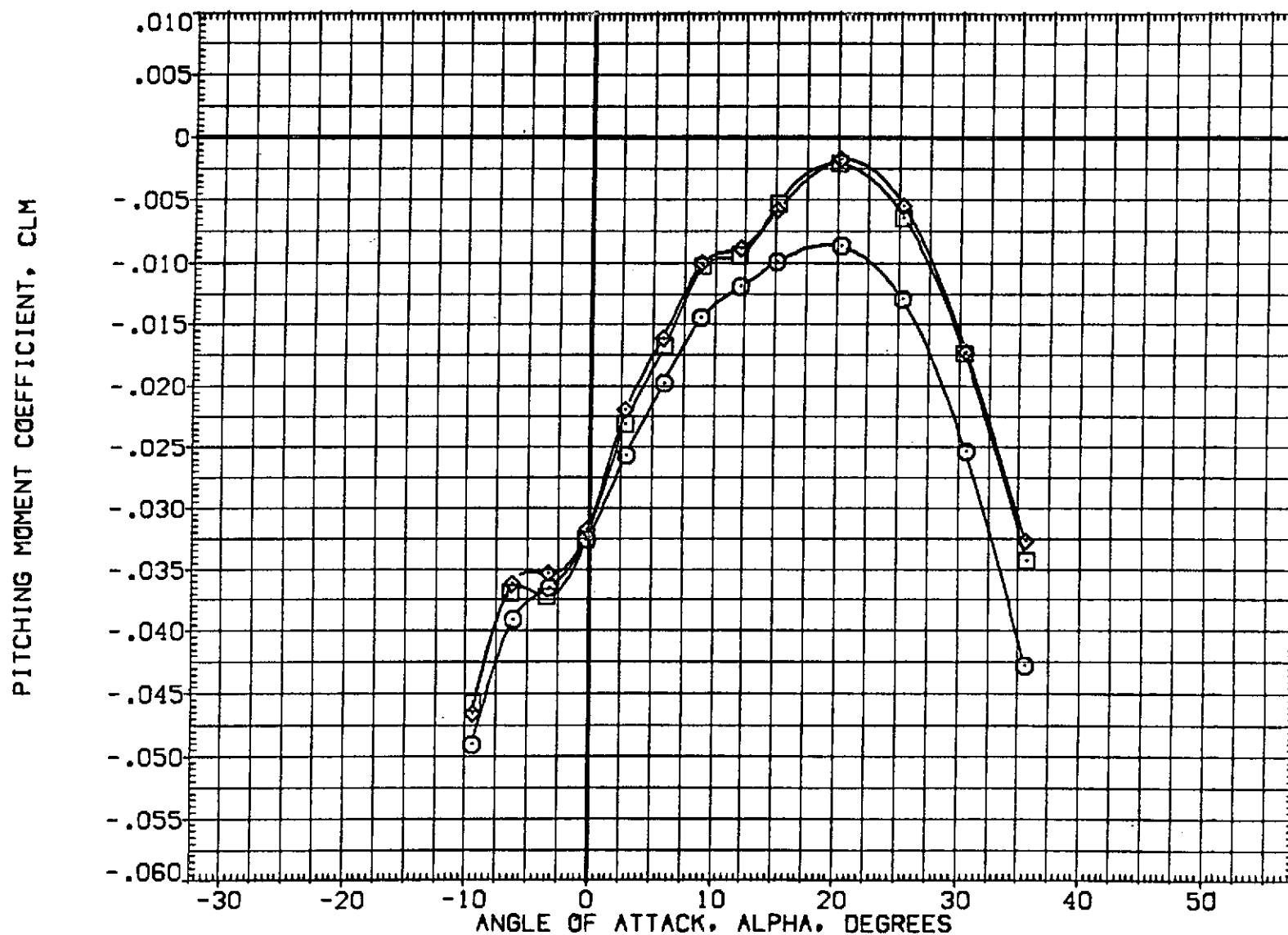


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF04) | QAS2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL011) | QAS2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL015) | QAS2 CFHT113 MODEL 32-0 ORB V/N51 (AIR) | 150.000 | 176.000 | 70.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

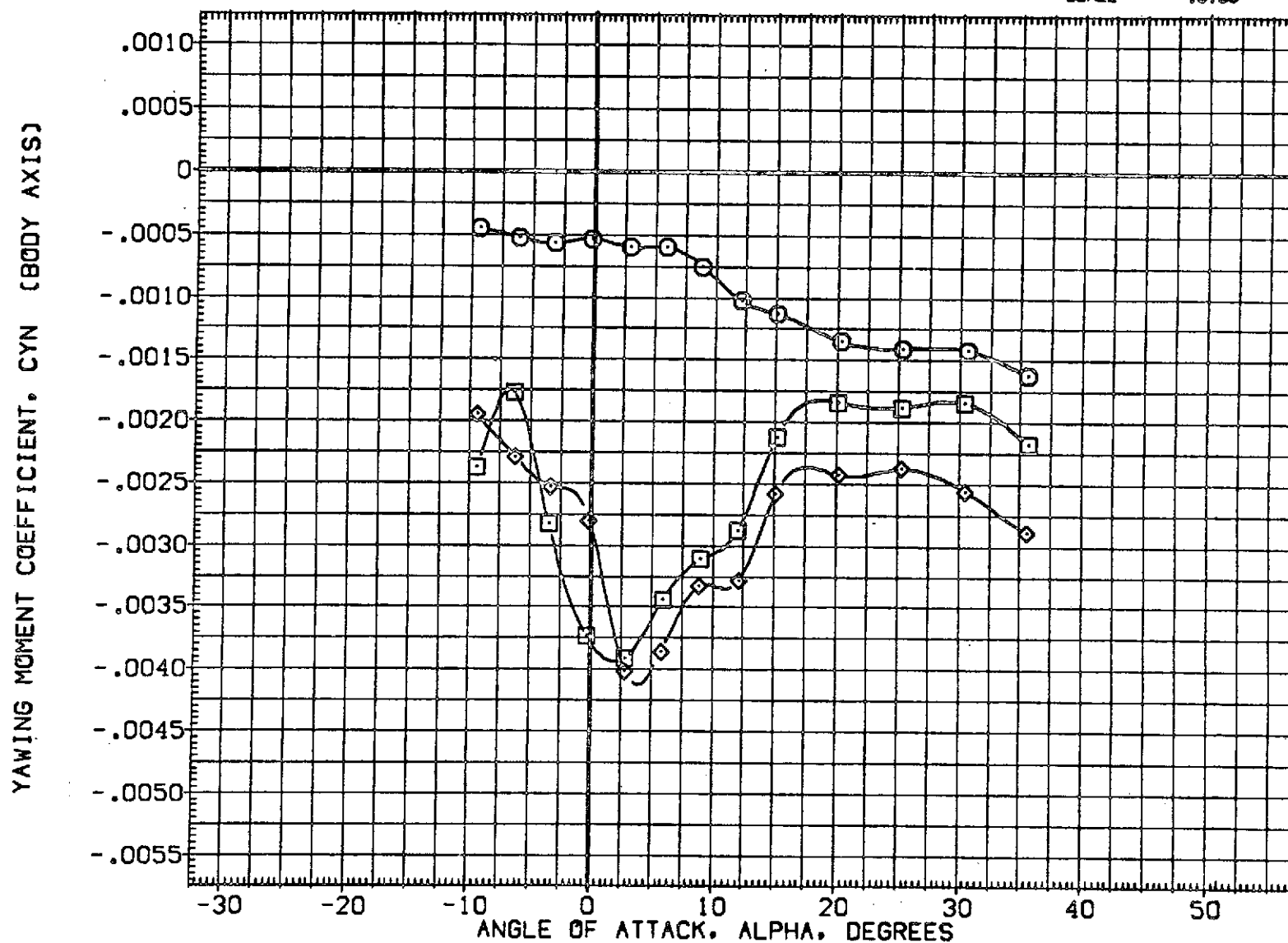


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/OA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|-----------|--------|
| (2-LF04) | QAS2 CFHT113 MODEL 32-0 888 V/N85 | 150.000 | 150.000 | 70.000 | 47.500 | SREF | 2020.0000 | SQ.FT. |
| (2-L011) | QAS2 CFHT113 MODEL 32-0 888 V/N85 | 150.000 | 150.000 | 70.000 | 47.500 | LREF | 471.0100 | IN. |
| (2-L015) | QAS2 CFHT113 MODEL 32-0 888 V/N51 | 150.000 | 150.000 | 70.000 | 47.500 | SREF | 875.0000 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

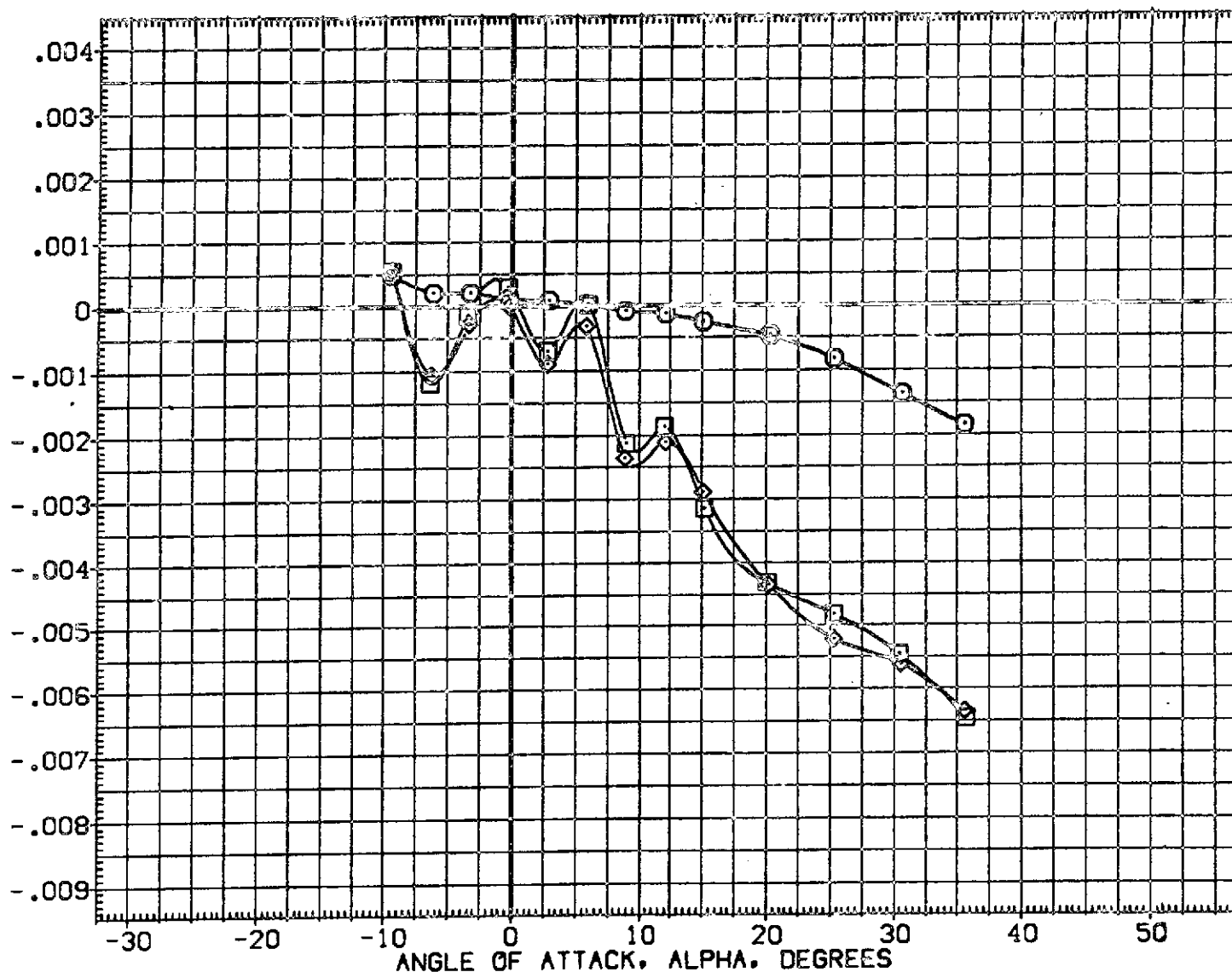


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|--------|-----------------------|-----------|--------|
| [RHLF04] | □ DAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | SQ.FT. |
| [RHL011] | ◇ DAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | LREF | 474.8100 | IN. |
| [RHL015] | ◇ DAB2 CFHT113 MODEL 32-0 ORB V/N51 (AIR) | 150.000 | 176.000 | 70.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

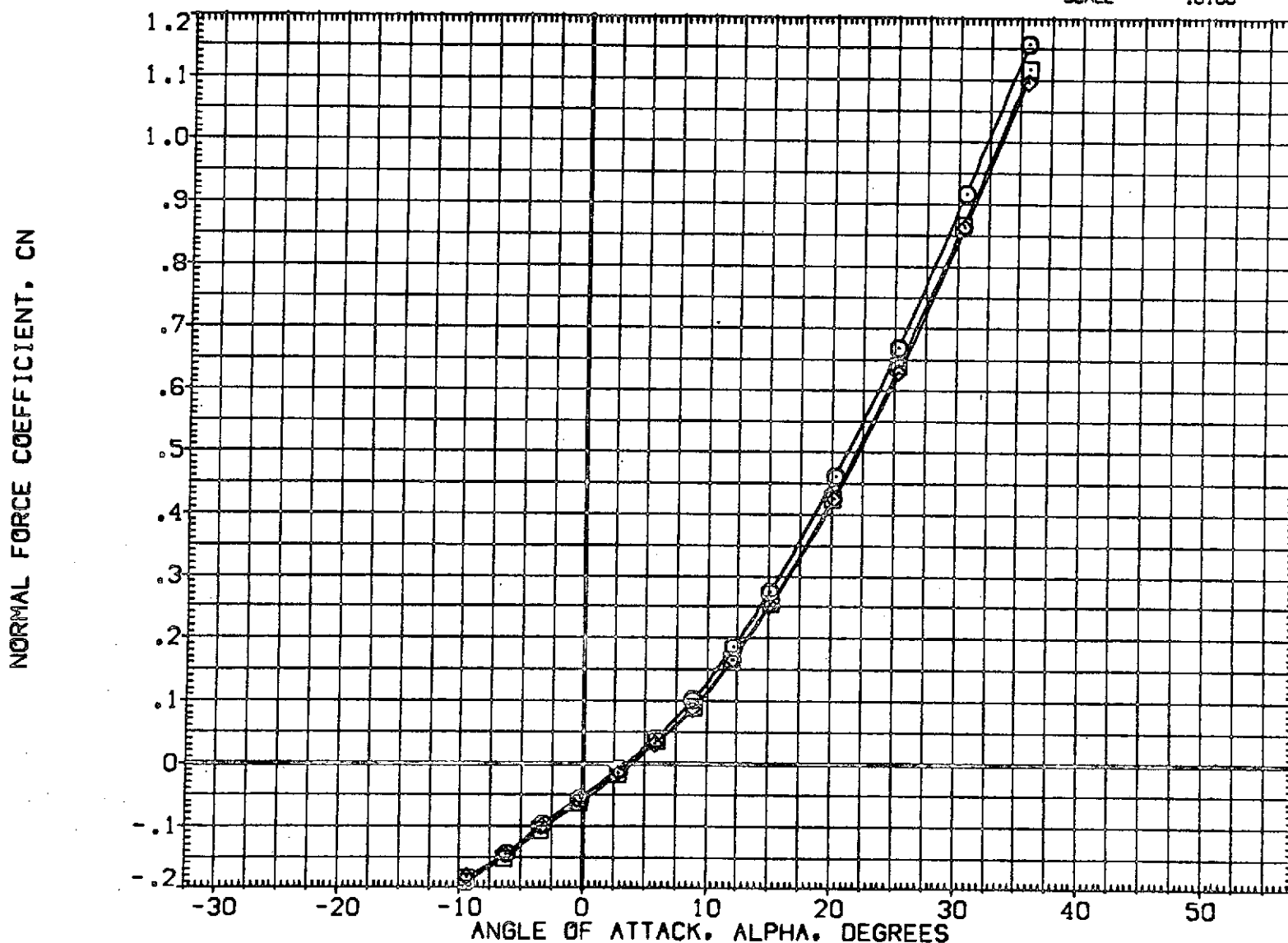


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(P3F) | PERCS | TCRCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|--------|-----------------------|-----------|--------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 OR3 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2600.0000 | 90.FT. |
| (RHL011) | 0A82 CFHT113 MODEL 32-0 OR3 V/N85 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | LREF | 474.8100 | IN. |
| (RHL015) | 0A82 CFHT113 MODEL 32-0 OR3 V/N51 (AIR) | 150.000 | 176.000 | 70.000 | 47.500 | BREF | 958.8300 | IN. |
| | | | | | | XMRP | 1076.7000 | IN. |
| | | | | | | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

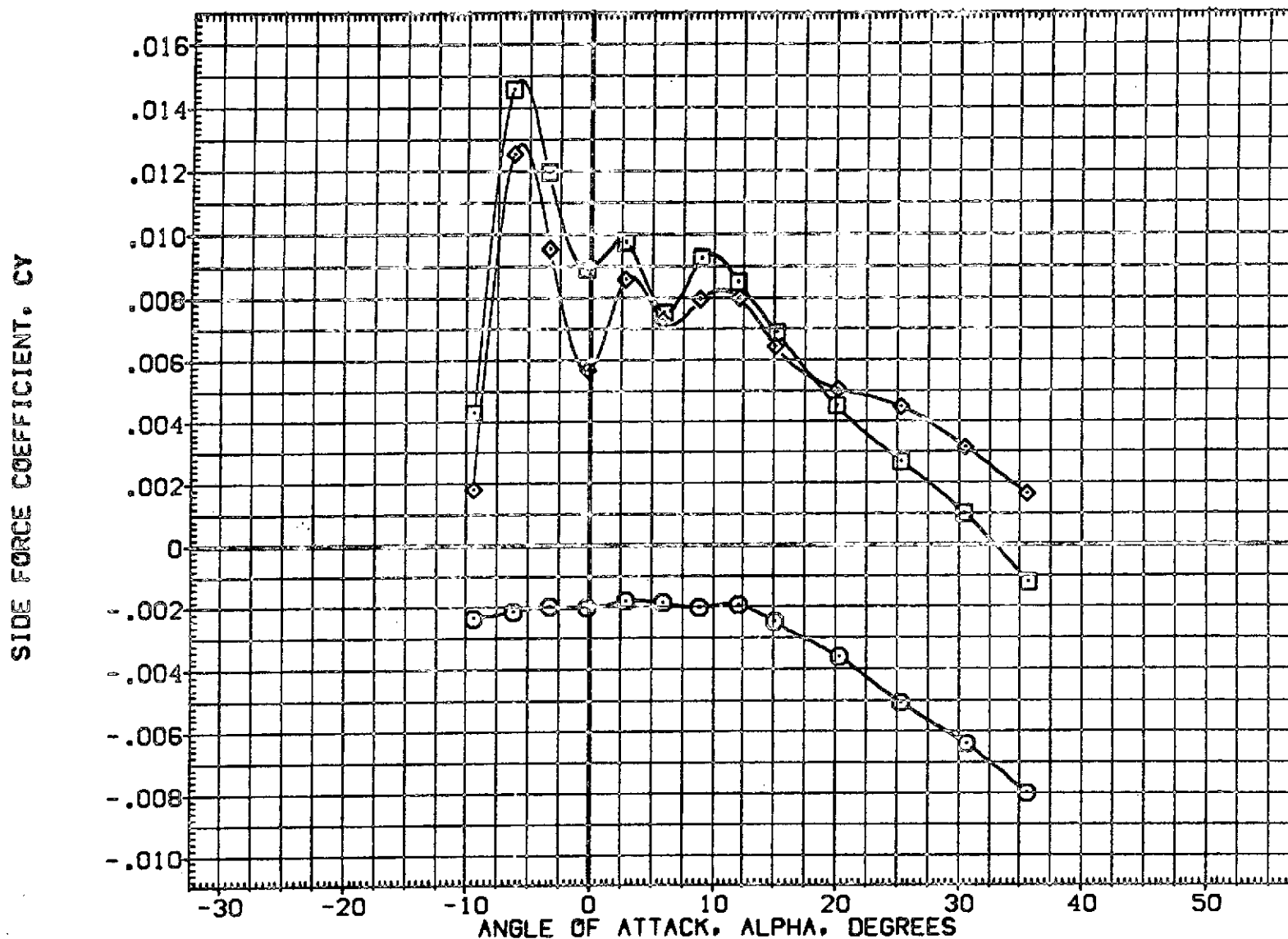


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|--------|--------|-----------------------|------------------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 GR8 V/N85 | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SO.FT. |
| (RHL011) | QAB2 CFHT113 MODEL 32-0 GR8 V/N85 | 150.000 | 158.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| (RHL015) | QAB2 CFHT113 MODEL 32-0 GR8 V/N51 | 150.000 | 176.000 | 70.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | | | XMRP | 1076.7000 IN. |
| | | | | | | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

AXIAL FORCE COEFFICIENT, CA

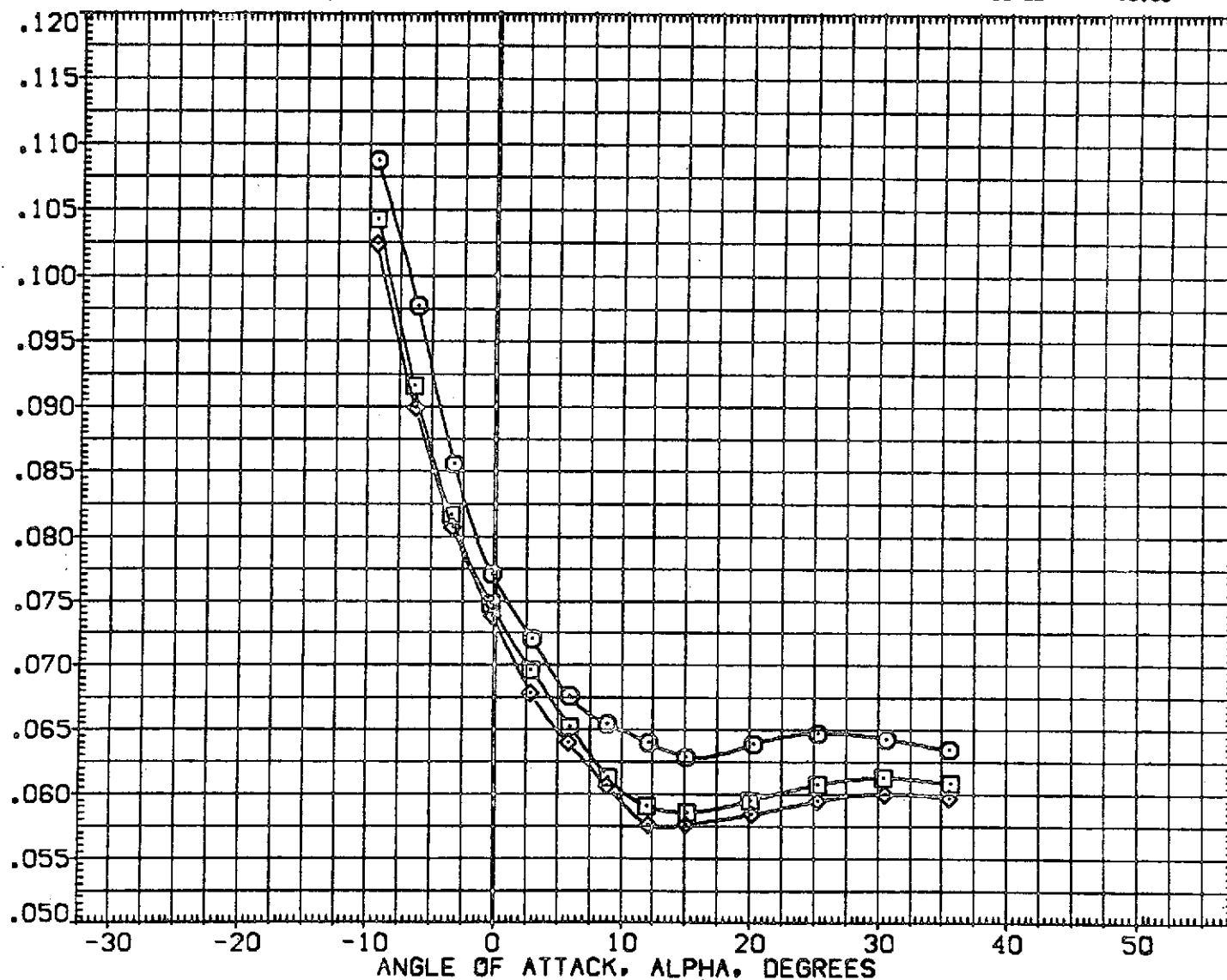


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC11) ○ | 0A82 CFHT113 MODEL 32-0 ORG V/N85 (AIR) |
| (CHLC15) □ | 0A82 CFHT113 MODEL 32-0 ORG V/N51 (AIR) |

| Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2650.0000 | 50.FT. |
| 150.000 | 176.000 | 70.000 | 47.500 | LREF | 474.8100 | IN. |
| | | | | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

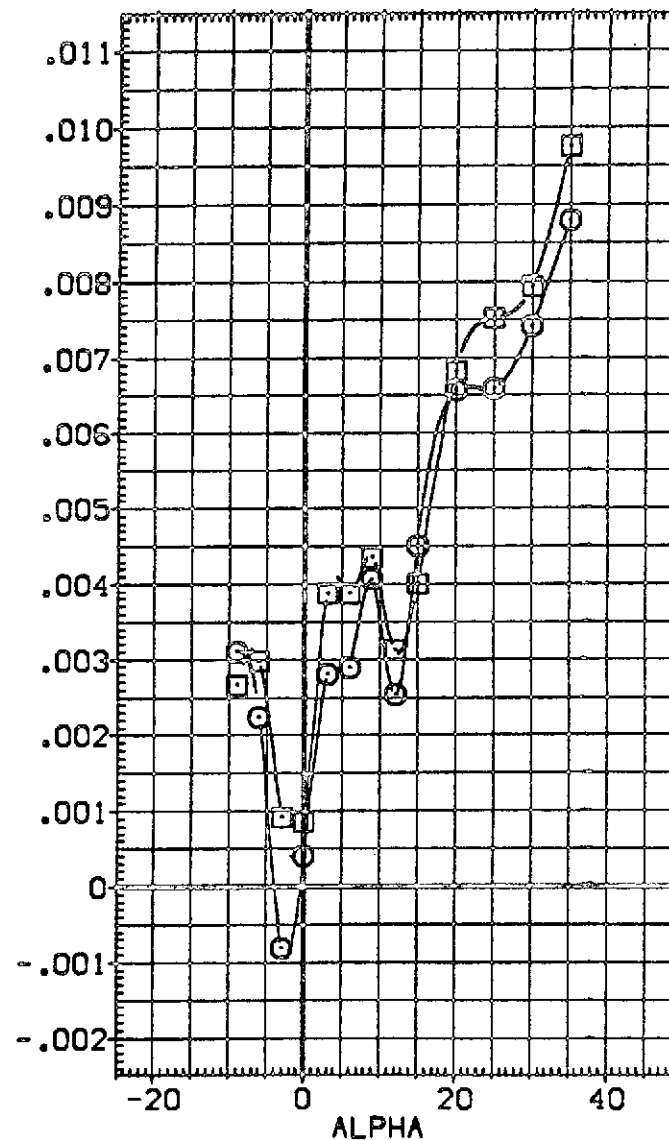
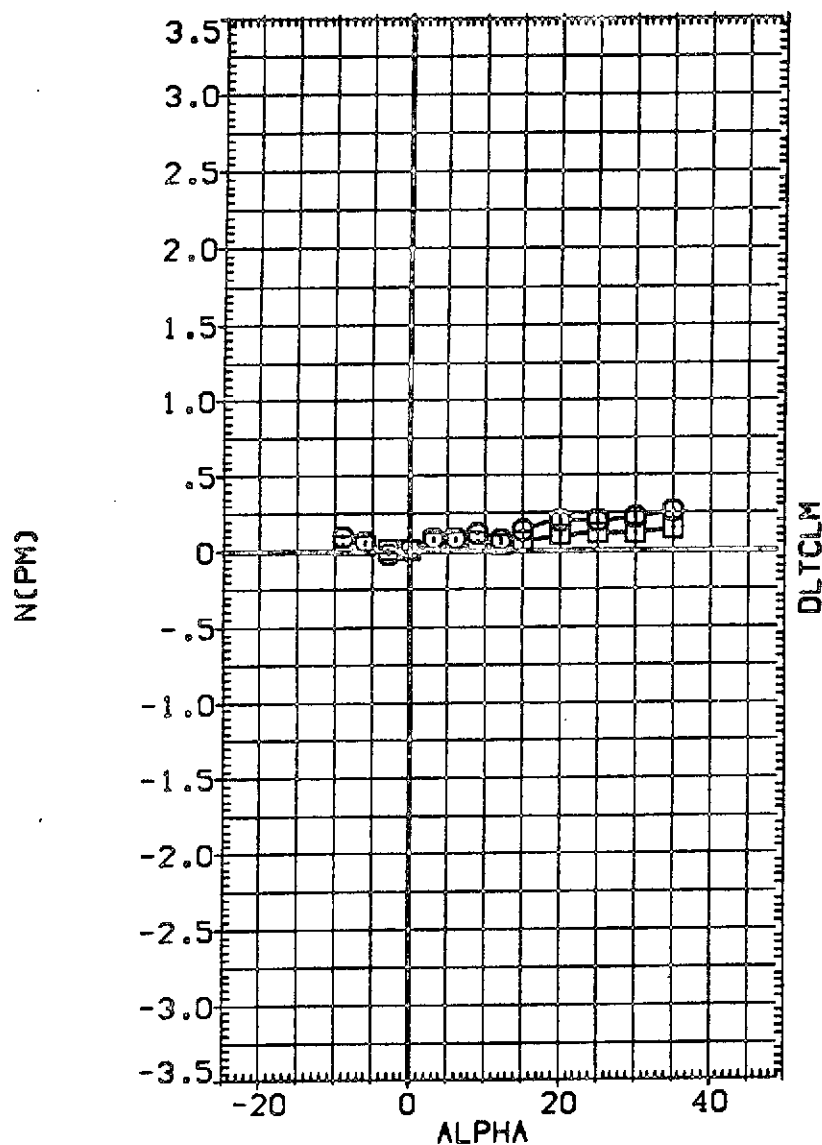


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC11) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |
| (CHLC15) | 0A82 CFHT113 MODEL 32-0 ORB V/N51 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 176.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

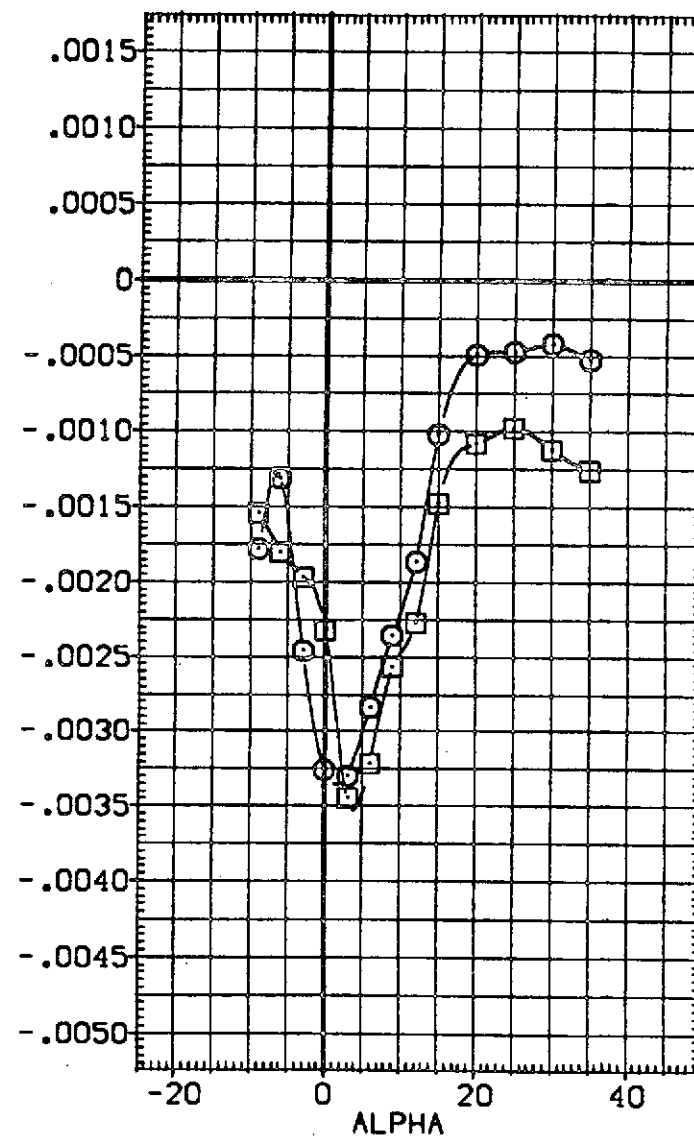
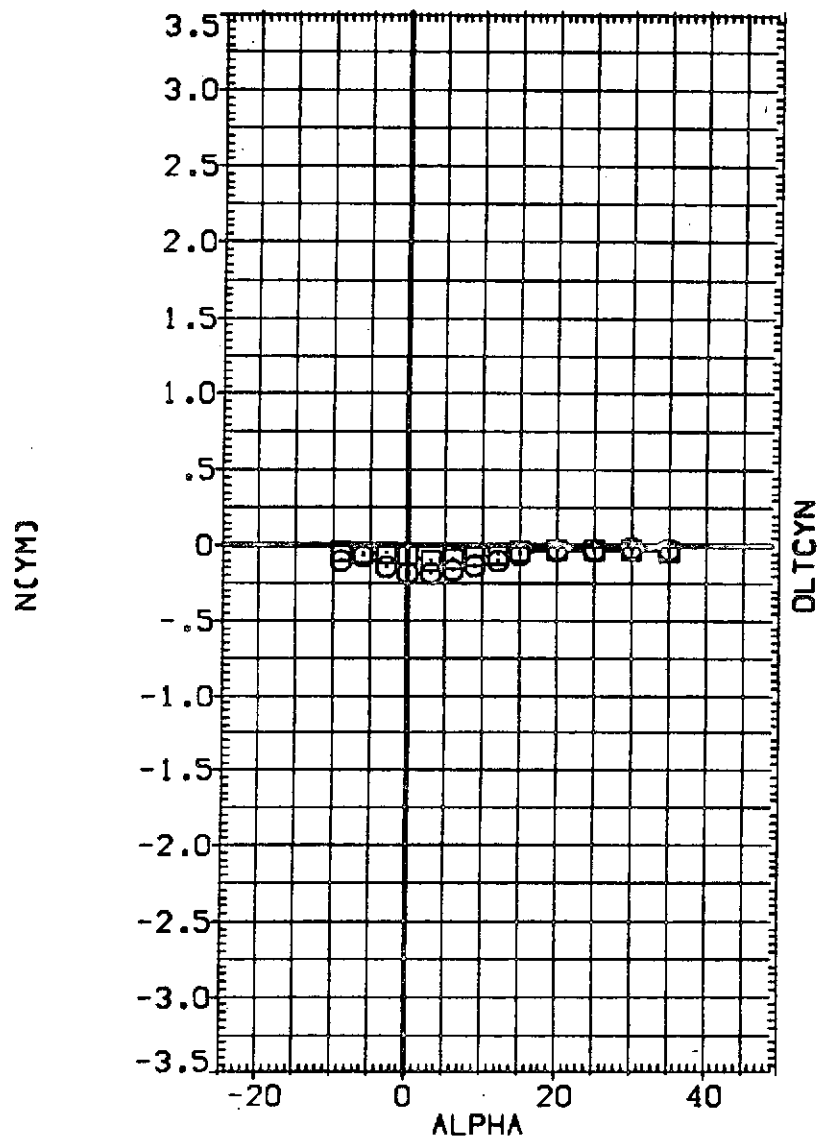


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC11] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) |
| [CHLC15] | QAB2 CFHT113 MODEL 32-0 ORB V/N51 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2890.0000 SQ.FT. |
| 150.000 | 176.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

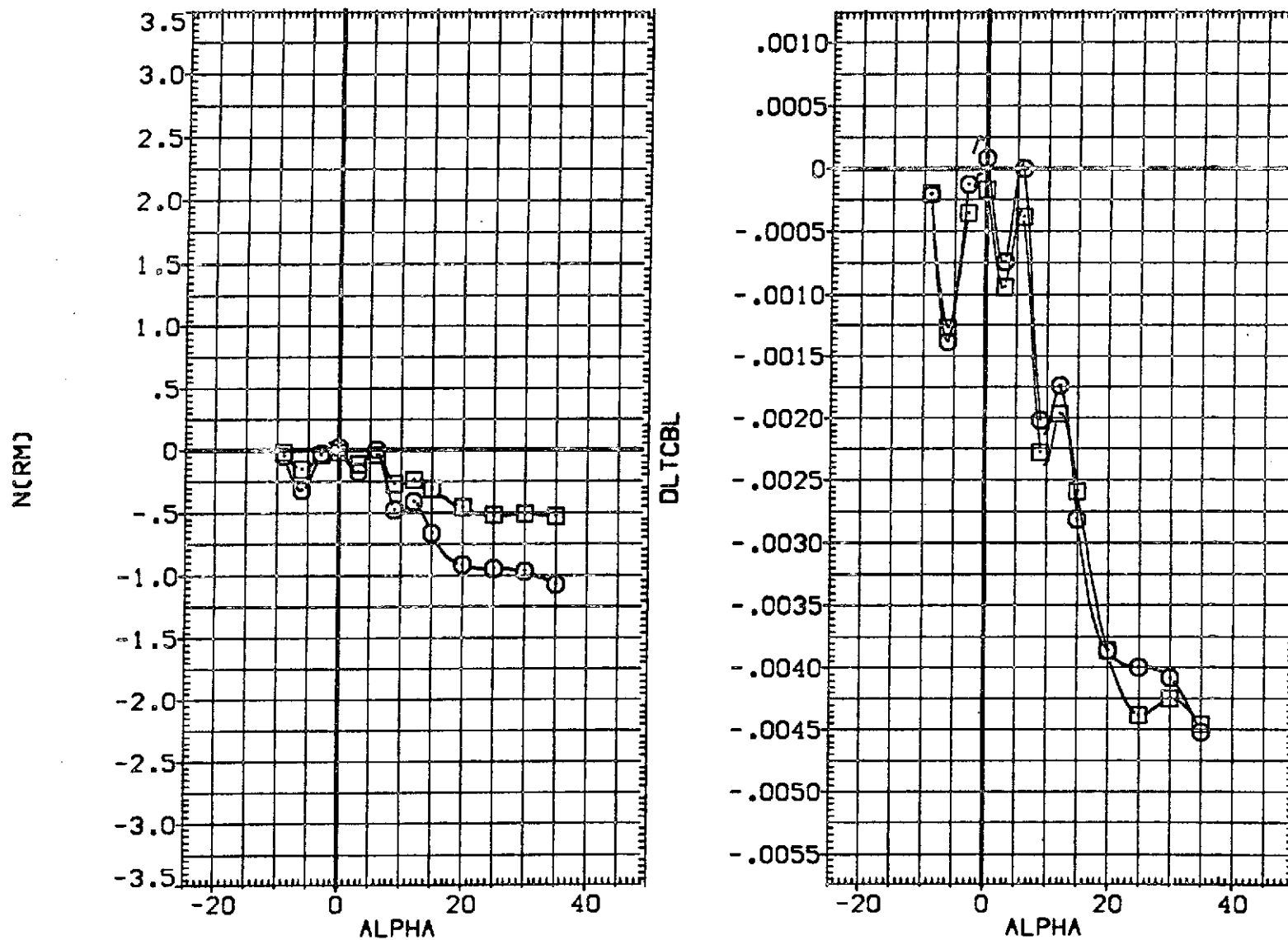


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHC11) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) |
| (CHC15) | 0A82 CFHT113 MODEL 32-0 ORB V/N51 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 176.000 | 70.000 | 47.500 | LREF | 474.8100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

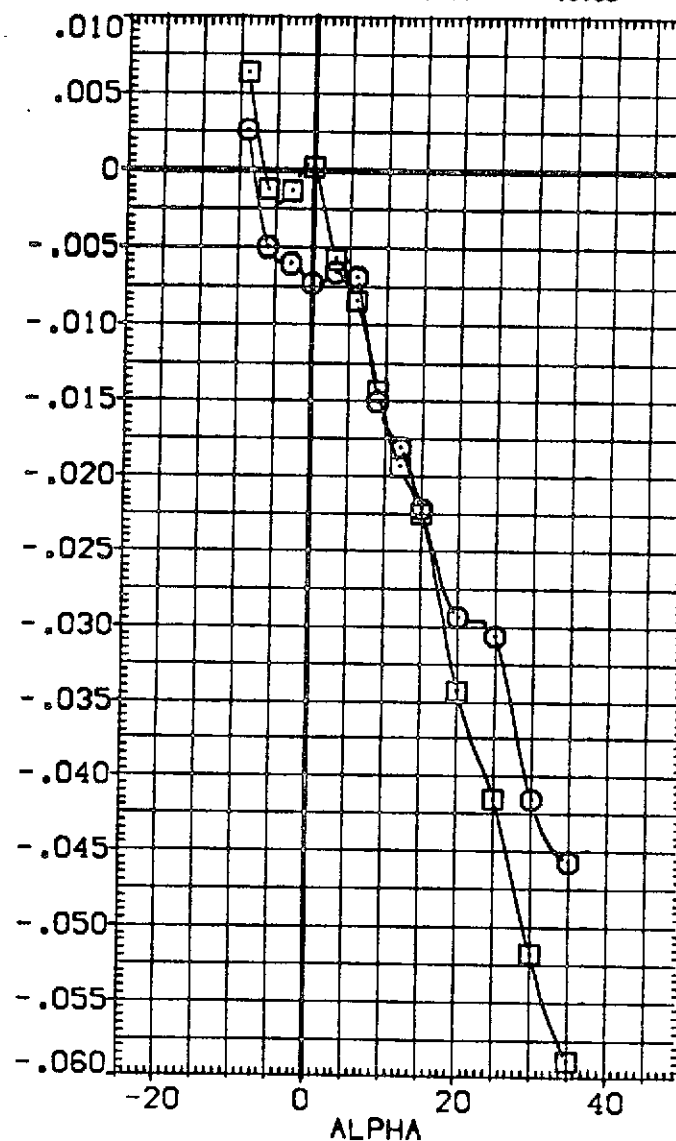
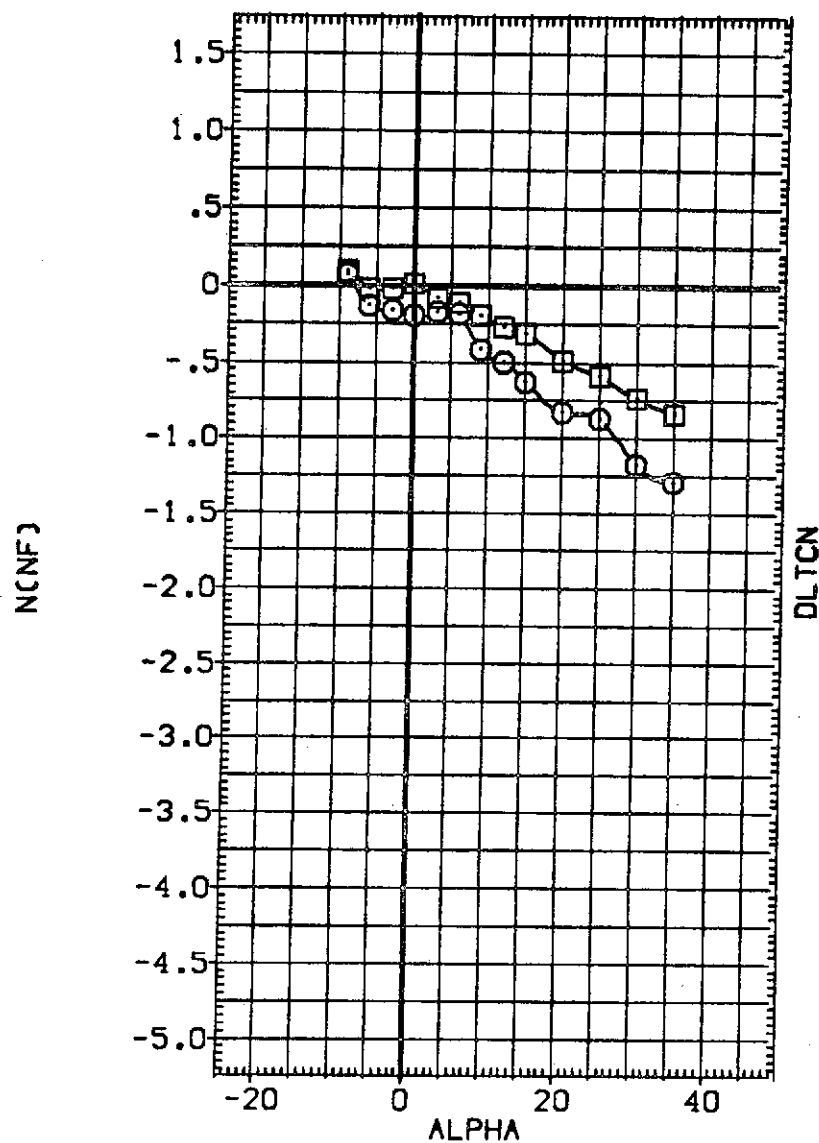


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC11) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) |
| (CHLC15) | QAB2 CFHT113 MODEL 32-0 ORB V/N51 | (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 176.000 | 70.000 | 47.500 | LREF | 474.3100 IN. |
| | | | | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

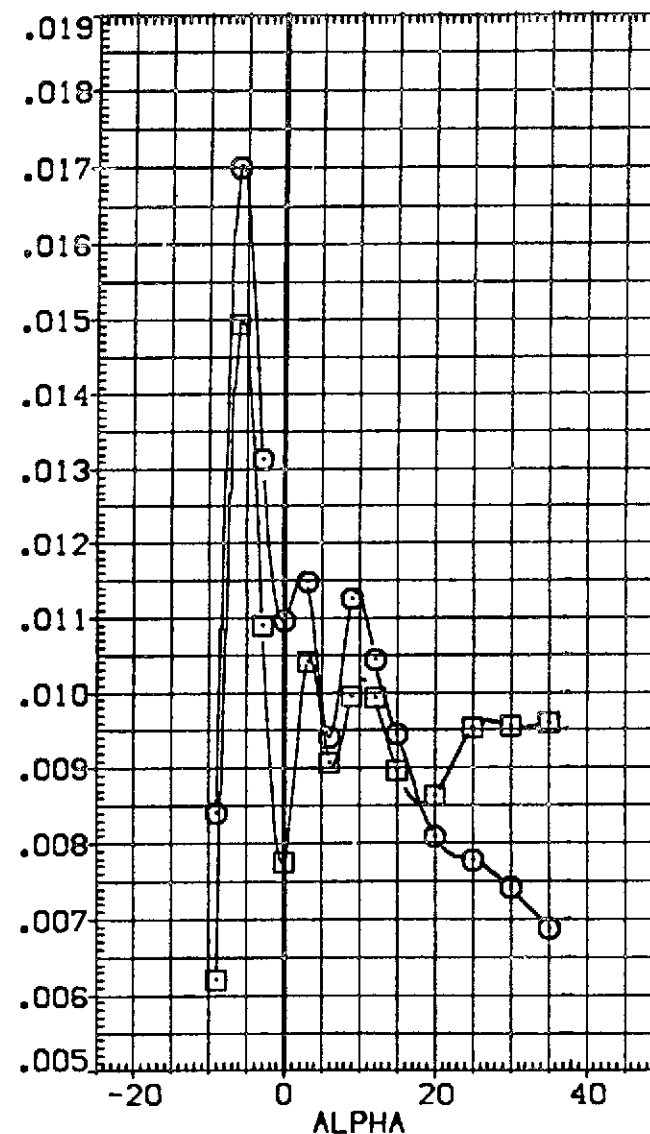
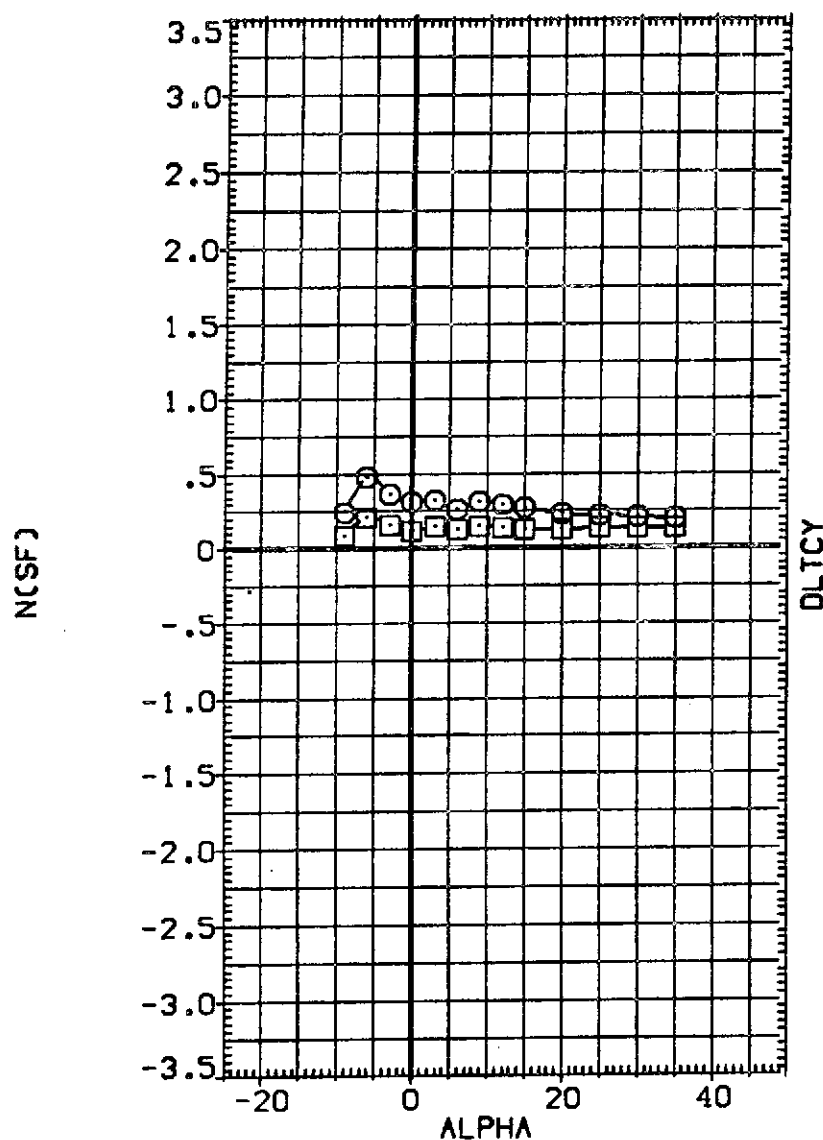


FIG. 18 COMPARISON OF N85 AND N51 USING AIR ON AERO CHARACT IN PITCH

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLF07) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .000 | .000 | .000 | LREF 474.8100 IN. |
| (RHL001) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | BREF 936.6800 IN. |
| (RHL023) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | XMRP 1076.7000 IN. |
| (RHL028) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| (RHL029) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 75.000 | 78.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

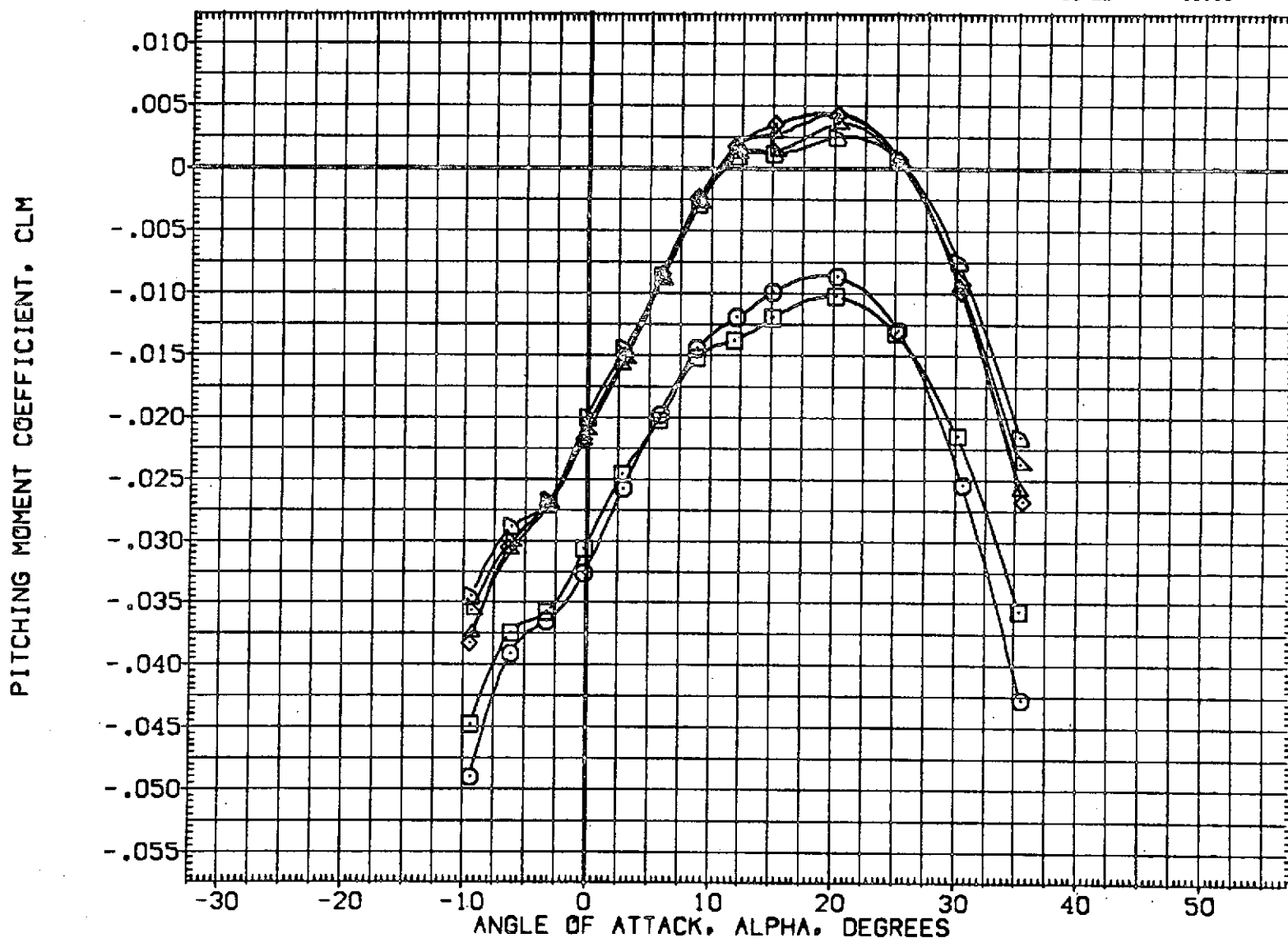


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PERCS | TORCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF04) | QA82 CFHT113 MODEL 32-0 GR8 V/N05 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLF07) | QA82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 75.000 | .000 | .000 | .000 | LREF 474.8100 IN. |
| (RHL001) | QA82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 150.000 | 155.000 | 69.000 | 47.500 | SREF 938.6800 IN. |
| (RHL023) | QA82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | XMRP 1076.7000 IN. |
| (RHL028) | QA82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| (RHL029) | QA82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 75.000 | 78.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

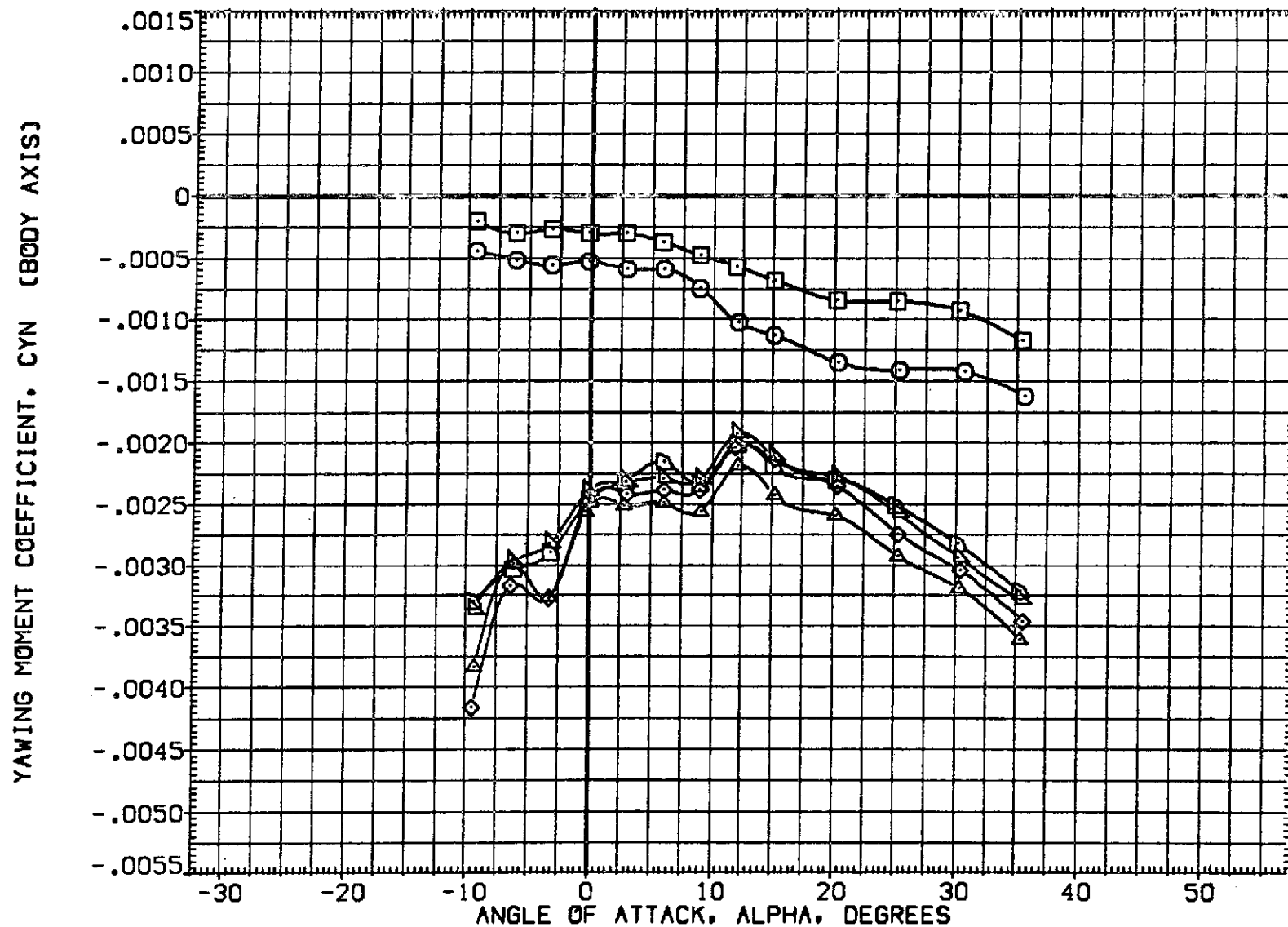


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHLF07) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | RCS OFF | 75.000 | .000 | .000 | .000 | LREF | 474.8100 IN. |
| (RHL001) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | BREF | 936.6800 IN. |
| (RHL023) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | XMRP | 1076.7000 IN. |
| (RHL028) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | YMRP | .0000 IN. |
| (RHL029) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 75.000 | 78.000 | 72.000 | 47.500 | ZMRP | 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

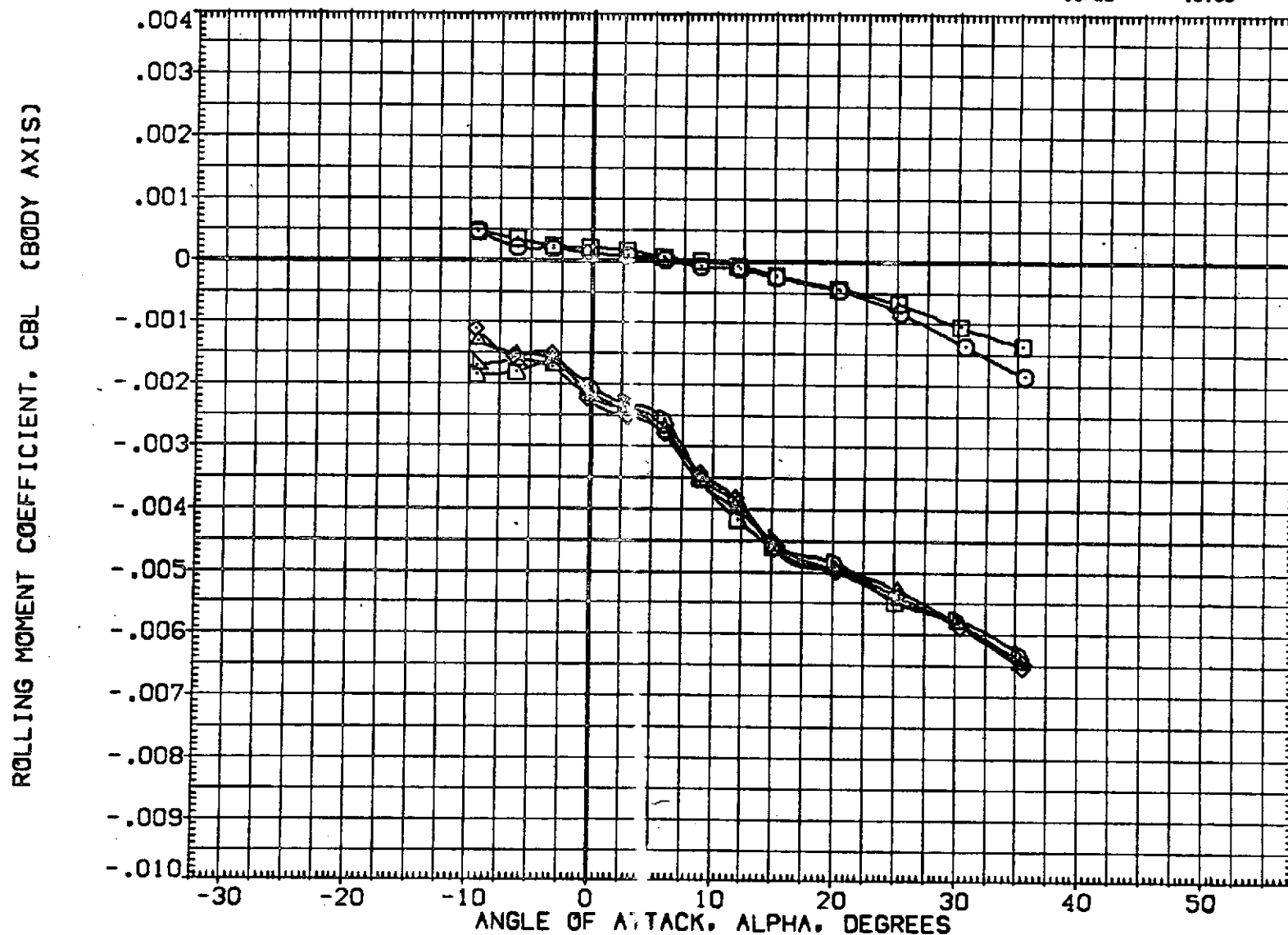


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET | SYMBOL | CONFIGURATION | DESCRIPTION | Q (PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|----------|--------|---------------|--------------------------------------|---------|---------|--------|--------|-----------------------|-----------|--------|
| (RHLF04) | □ | 0A82 | CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | SQ.FT. |
| (RHLF07) | □ | 0A82 | CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 75.000 | .000 | .000 | .000 | LREF | 474.8100 | IN. |
| (RHL001) | ◇ | 0A82 | CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| (RHL023) | ◇ | 0A82 | CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | XMRP | 1076.7000 | IN. |
| (RHL028) | ◇ | 0A82 | CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | YMRP | .0000 | IN. |
| (RHL029) | ◇ | 0A82 | CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 75.000 | 78.000 | 72.000 | 47.500 | ZMRP | 375.0000 | IN. |
| | | | | | | | | | SCALE | .0100 |

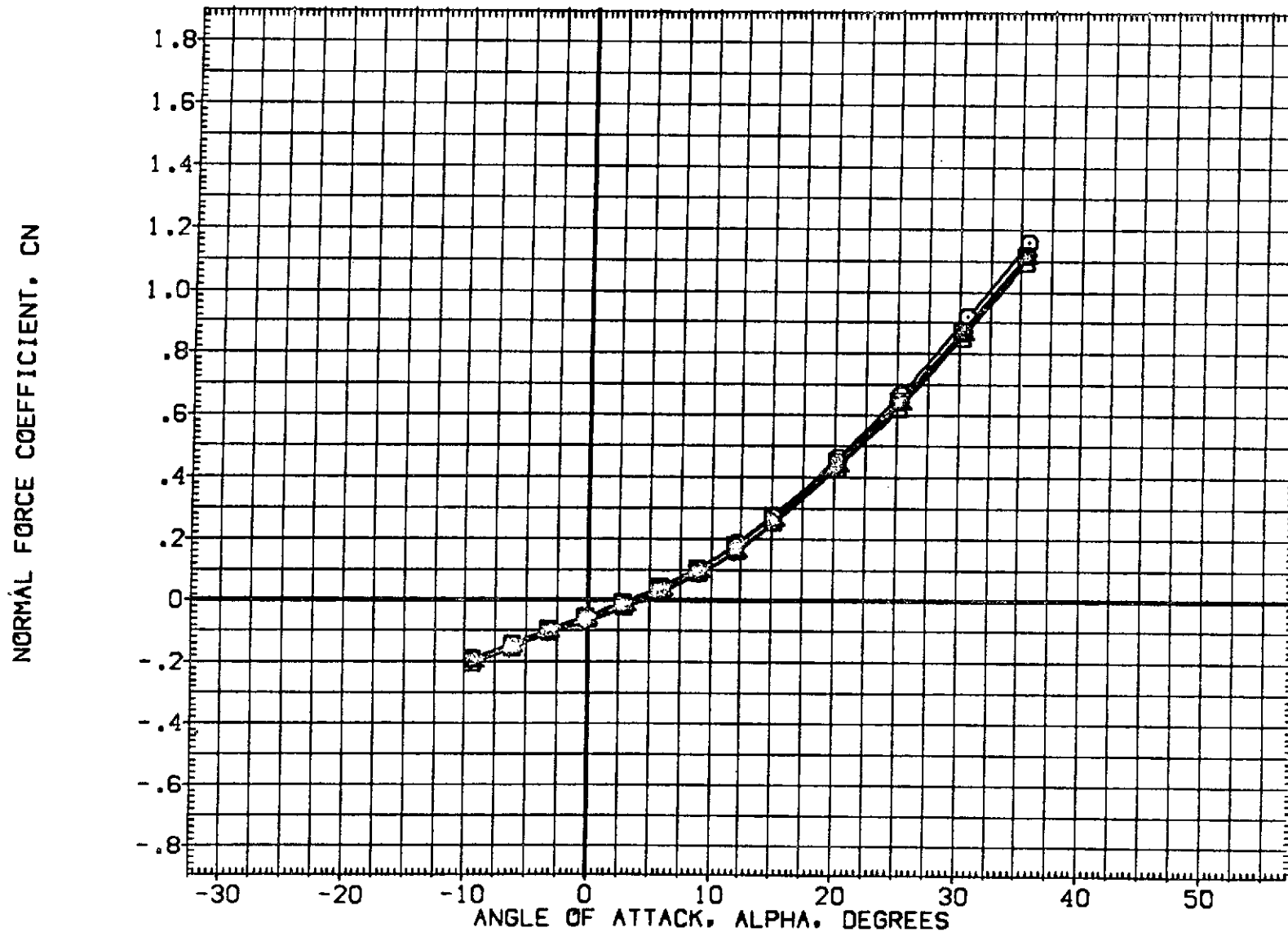


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|-----------|--------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHLF07) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | RCS OFF | 75.000 | .000 | .000 | .000 | LREF | 474.8100 | IN. |
| (RHL001) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 150.000 | 155.000 | 68.000 | 47.500 | BREF | 936.6800 | IN. |
| (RHL023) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | XMRP | 1076.7000 | IN. |
| (RHL028) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | YMRP | .0000 | IN. |
| (RHL029) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 75.000 | 78.000 | 72.000 | 47.500 | ZMRP | 375.0000 | IN. |
| | | | | | | | SCALE | .0100 | |

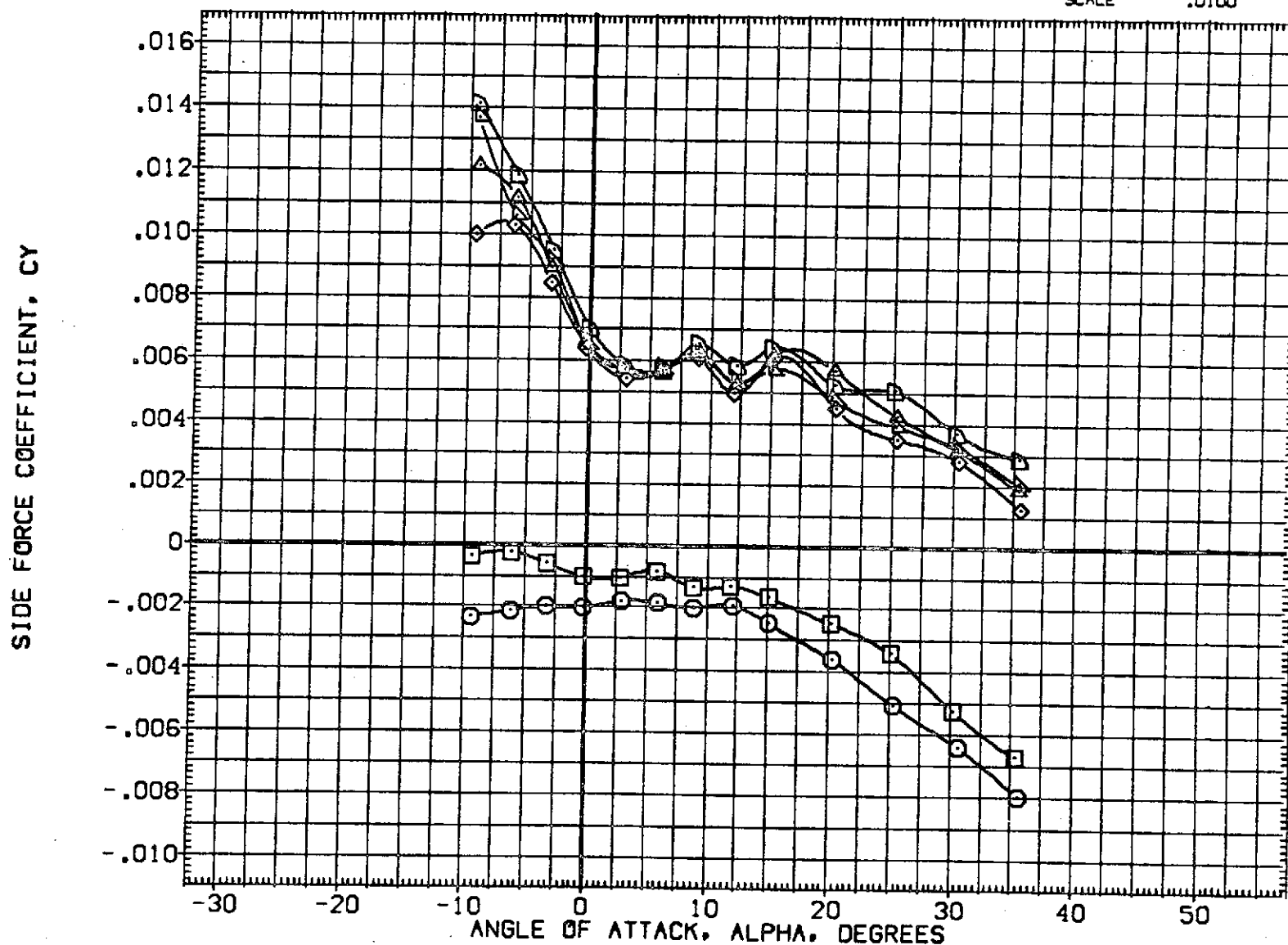


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|
| [RHLF04] | 0A82 CFHT113 MODEL 32-0 GR8 V/N85 | RCS OFF | 150,000 | .000 | .000 | .000 | SREF 2650.0000 SQ.FT. |
| [RHLF07] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 | RCS OFF | 75,000 | .000 | .000 | .000 | LREF 474.0100 IN. |
| [RHL001] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 | (AIR) | 150,000 | 155,000 | 68,000 | 47,500 | SREF 935.6300 IN. |
| [RHL023] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 | (AIR) | 125,000 | 129,000 | 72,000 | 47,500 | XMRP 1076.7000 IN. |
| [RHL028] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 | (AIR) | 100,000 | 103,000 | 72,000 | 47,500 | YMRP .0000 IN. |
| [RHL029] | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 | (AIR) | 75,000 | 76,000 | 72,000 | 47,500 | ZMRP 375.0000 IN. |
| | | | | | | | SCALE .0100 |

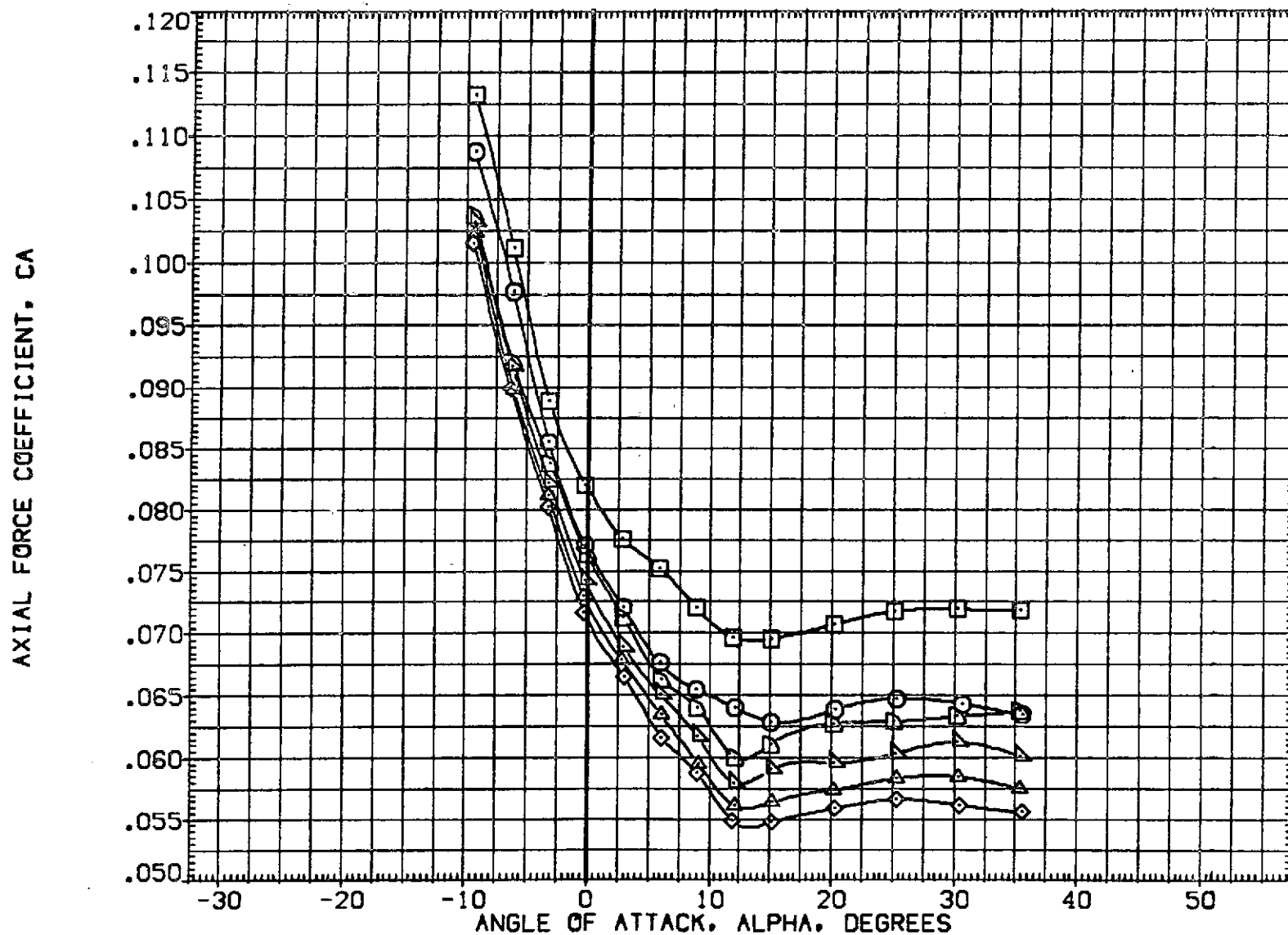


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC01) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC23) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC28) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC29) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF | 474.8100 IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 936.6800 IN. |
| 75.000 | 78.000 | 72.000 | 47.500 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

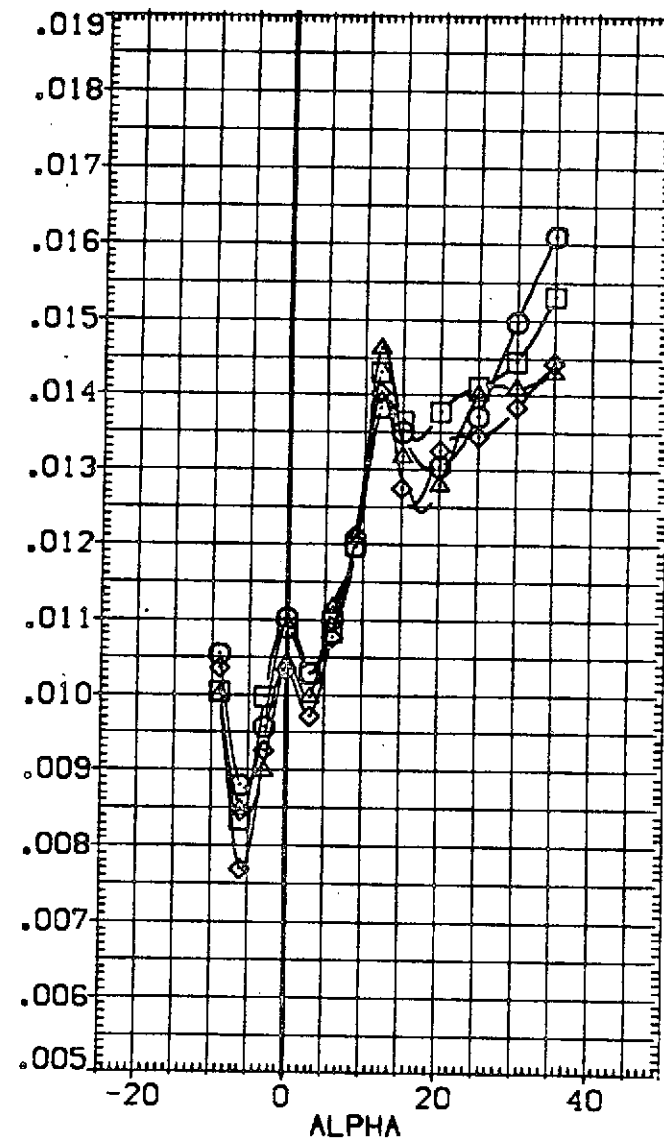
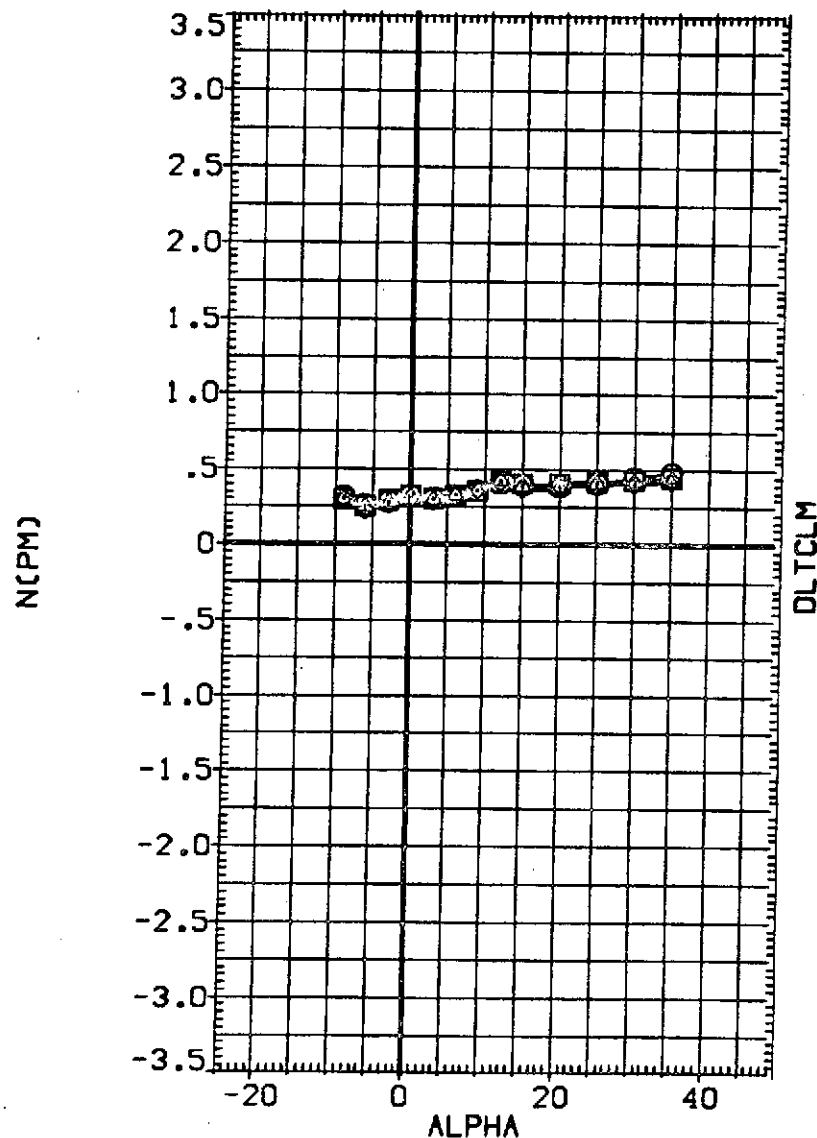


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC01] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| [CHLC23] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| [CHLC28] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| [CHLC29] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PCPCS | TCPCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2880.0000 | 80.FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF | 474.8100 | IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 936.6800 | IN. |
| 75.000 | 78.000 | 72.000 | 47.500 | XMRF | 1076.7000 | IN. |
| | | | | YMRF | .0000 | IN. |
| | | | | ZMRF | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

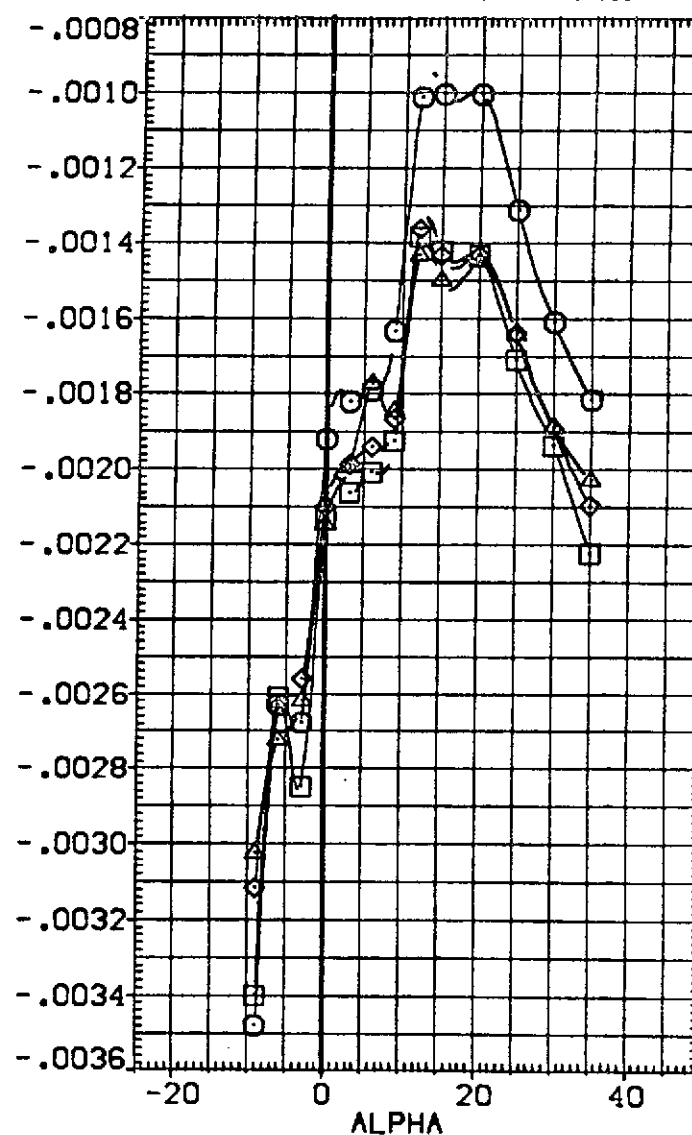
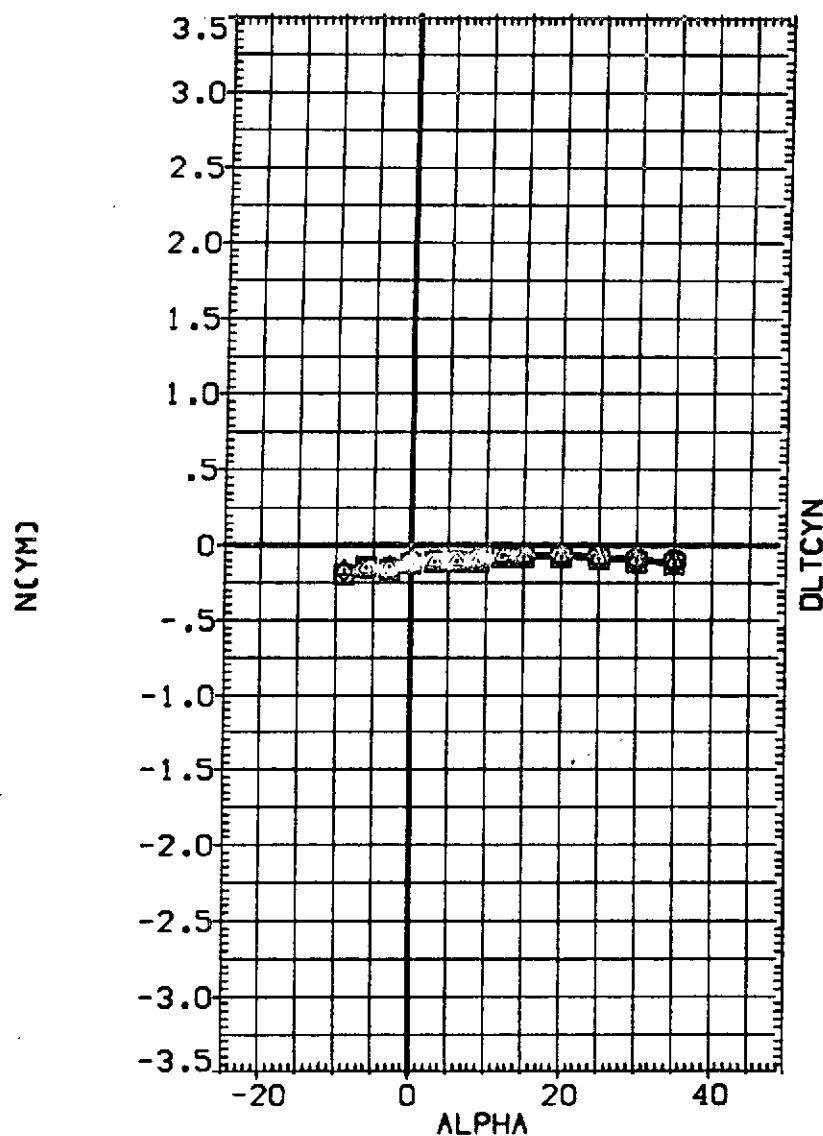


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A)MACH. = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC01) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC23) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC28) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC29) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF | 2690.0000 | SQ.FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF | 474.8100 | IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 936.6800 | IN. |
| 75.000 | 78.000 | 72.000 | 47.500 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

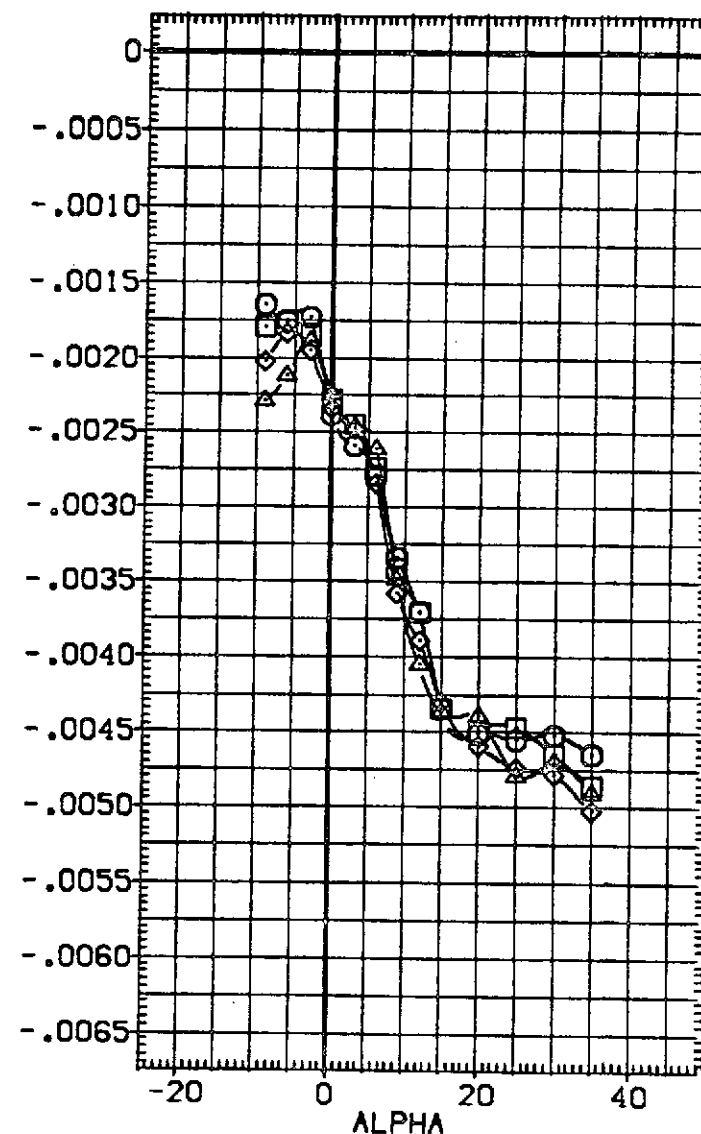
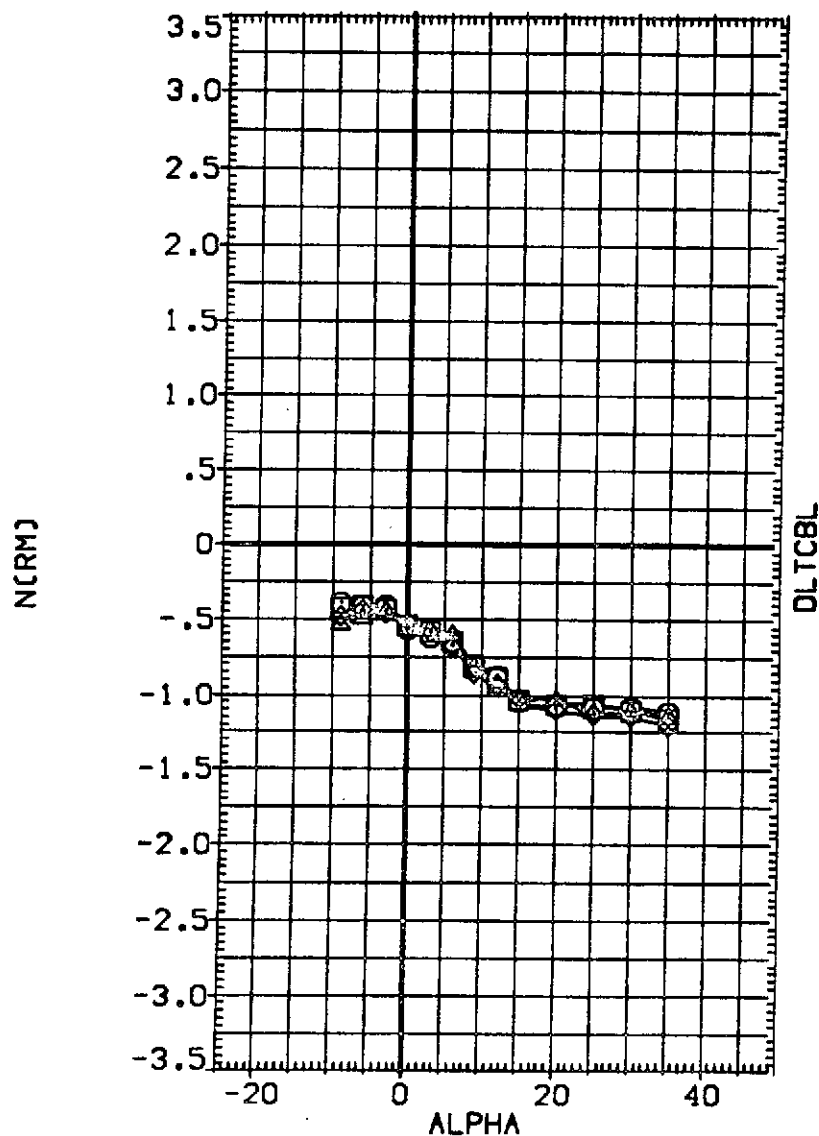


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC01) | QAG2 CFHT113 MODEL 32-0 CRB V/N49 (AIR) |
| (CHLC23) | QAG2 CFHT113 MODEL 32-0 CRB V/N49 (AIR) |
| (CHLC28) | QAG2 CFHT113 MODEL 32-0 CRB V/N49 (AIR) |
| (CHLC29) | QAG2 CFHT113 MODEL 32-0 CRB V/N49 (AIR) |

| Q(PSF) | FORCS | TORCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|---------|
| 150.000 | 135.000 | 69.000 | 47.500 | SREF | 2830.0000 | 50. FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF | 474.8100 | IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 935.6300 | IN. |
| 75.000 | 78.000 | 72.000 | 47.500 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

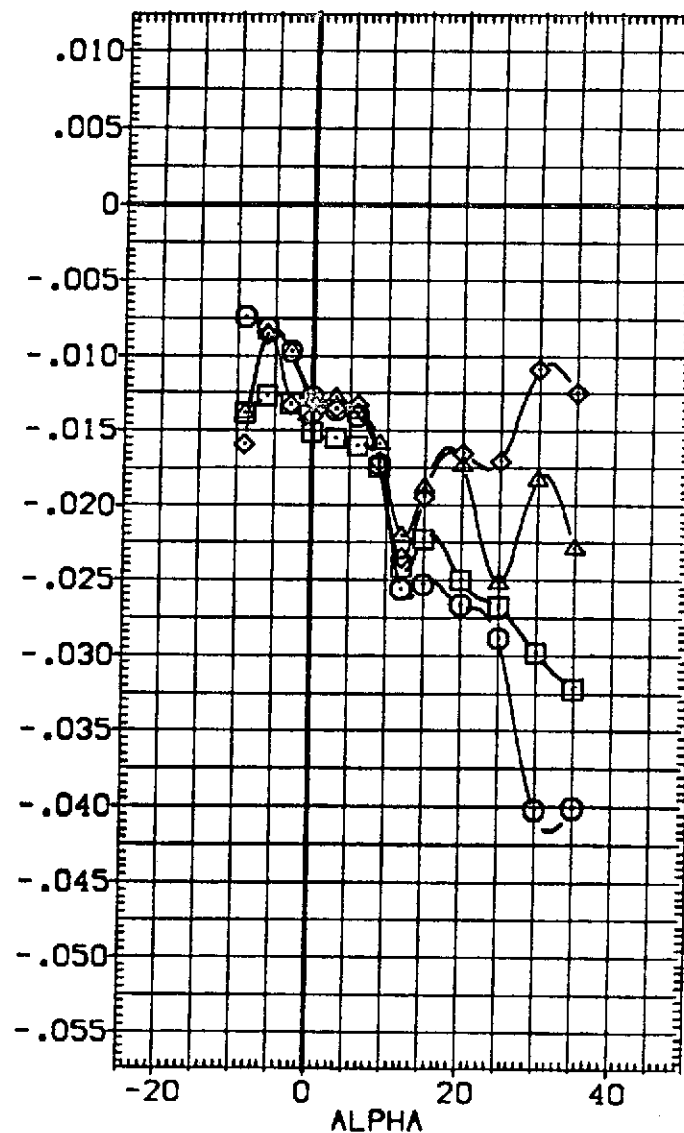
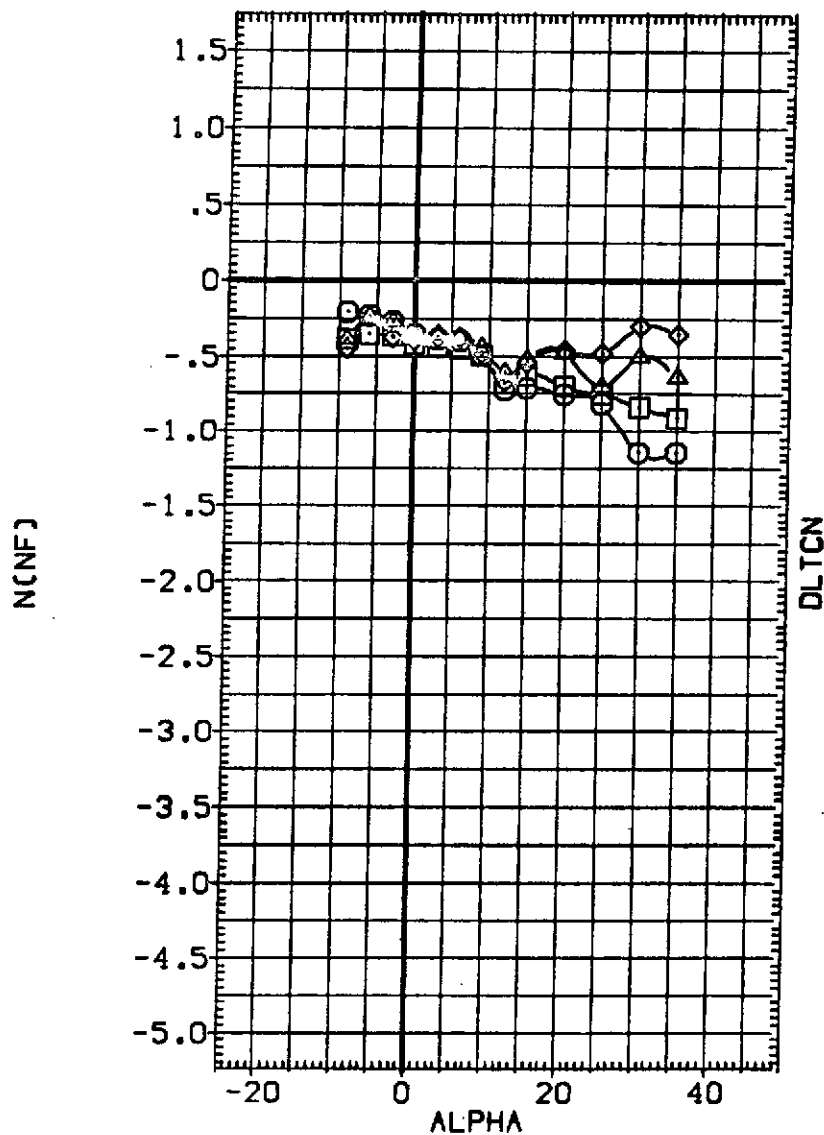


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC01) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| (CHLC23) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| (CHLC28) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| (CHLC29) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |

| Q(PSF) | PCRC | TORCS | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|--------|-----------------------|
| 150.000 | 155.000 | 68.000 | 47.500 | SREF 2690.0000 SQ.FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF 474.8100 IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF 936.6800 IN. |
| 75.000 | 78.000 | 72.000 | 47.500 | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

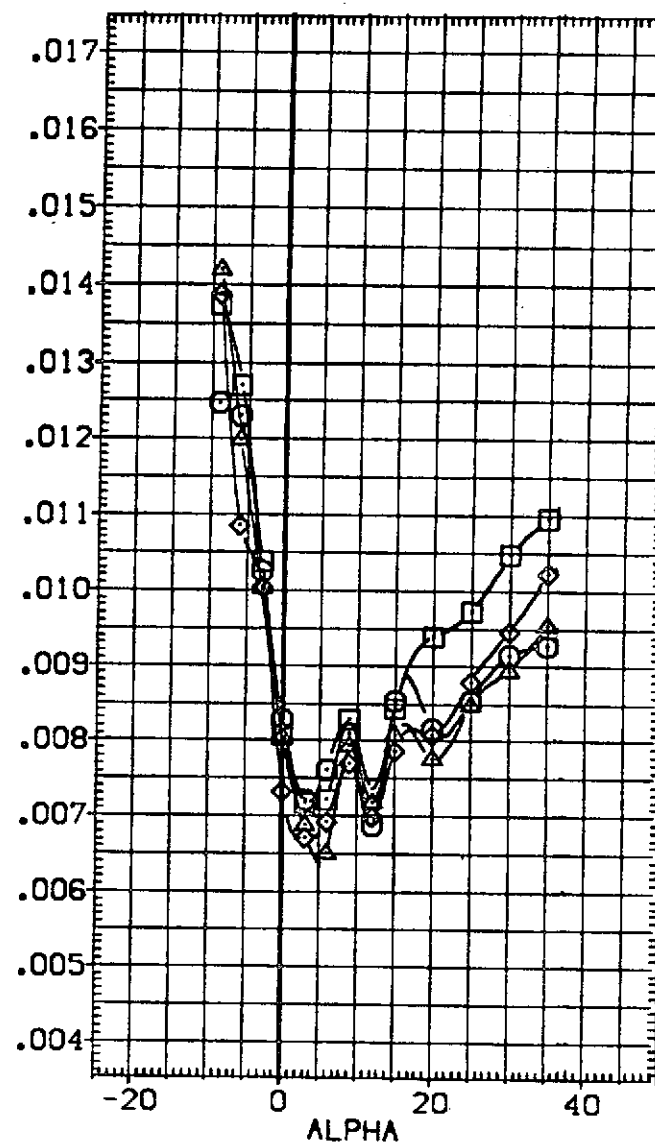
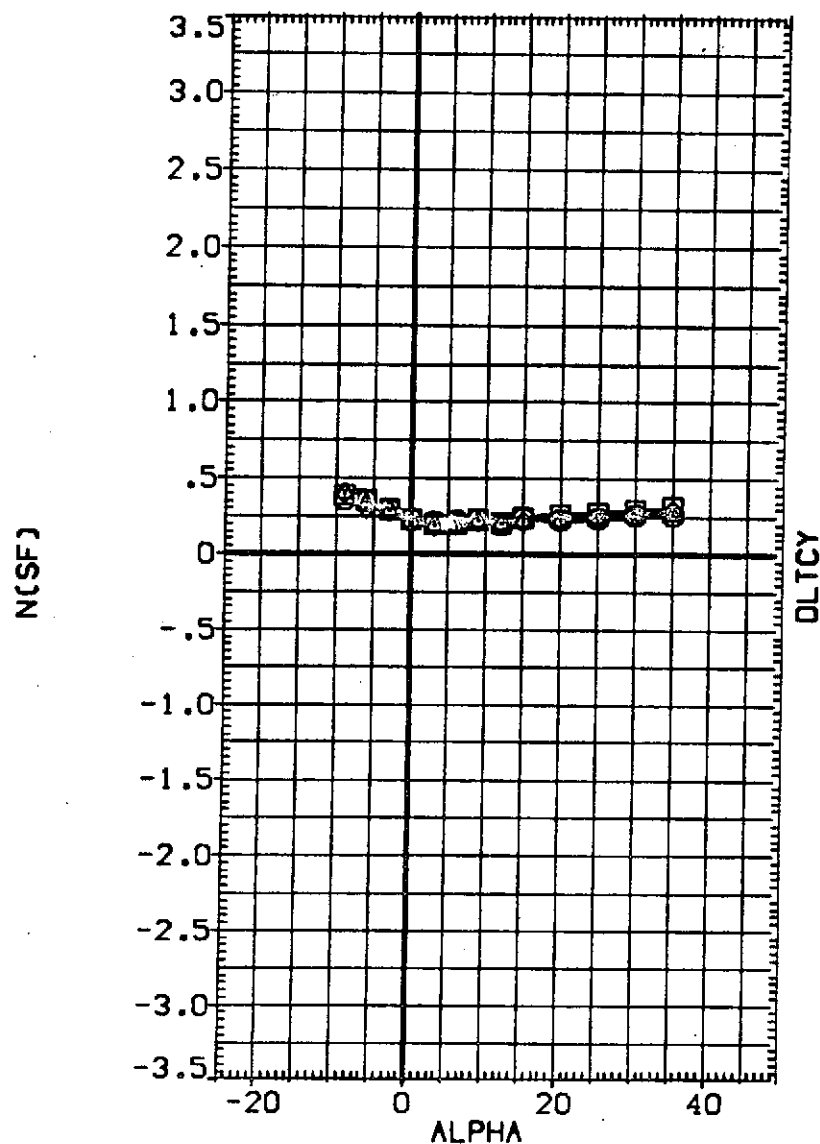


FIG. 19 EFFECT OF T/QA SIMULATION USING AIR WITH N49 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| [RHLF04] | GA82 CFHT113 MODEL 32-0 ORB V/N55 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2600.0000 90.FT. |
| [RHLF05] | GA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF 474.9100 IN. |
| [RHLF06] | GA82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | SREF 938.6900 IN. |
| [RHL009] | GA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| [RHL025] | GA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 123.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| [RHL026] | GA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

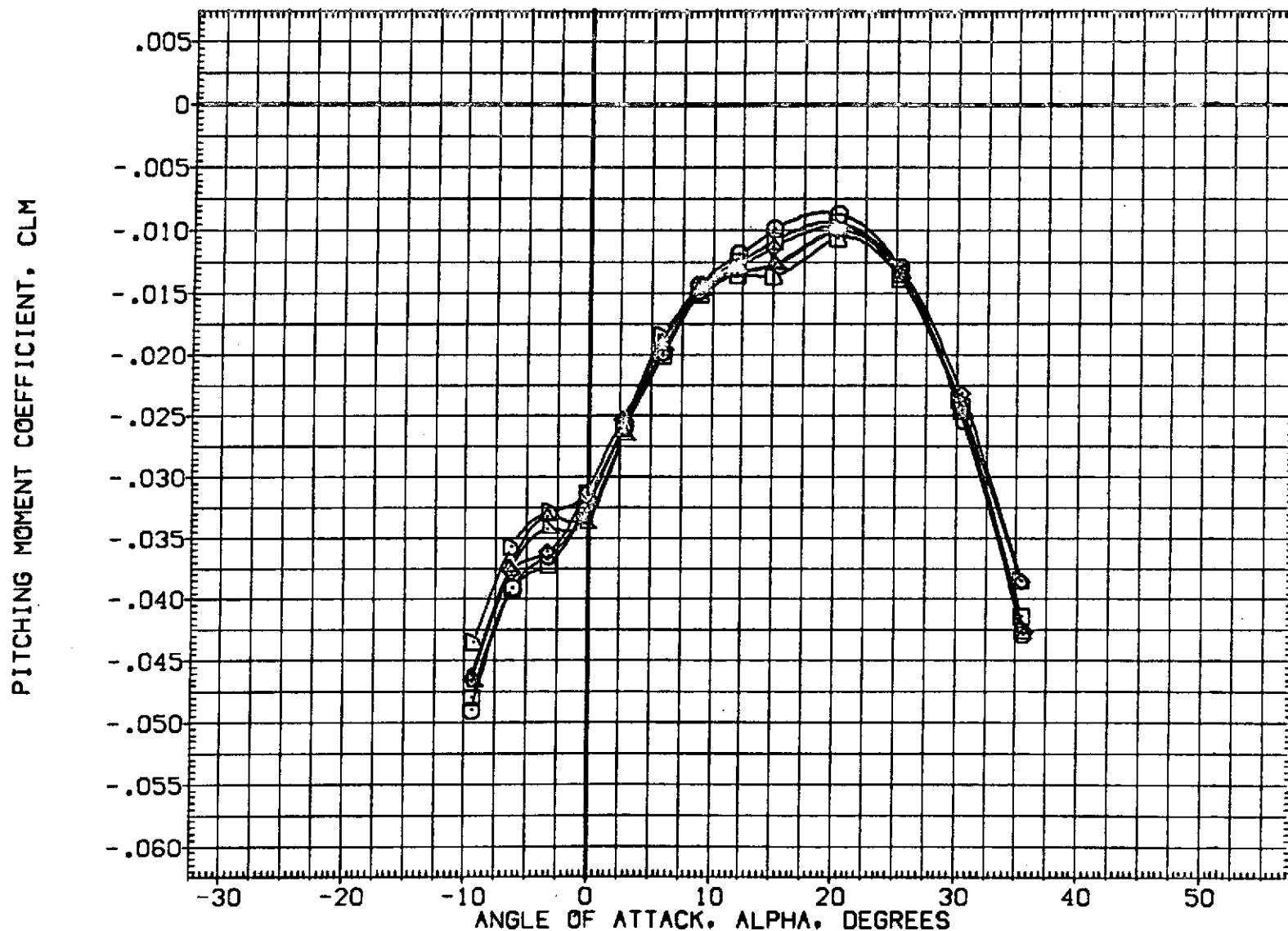


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| [R]LF04] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [R]LF05] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF 474.8100 IN. |
| [R]LF06] | QAB2 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | BREF 936.6800 IN. |
| [R]LF08] | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| [R]LF09] | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| [R]LF10] | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 100.000 | 109.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

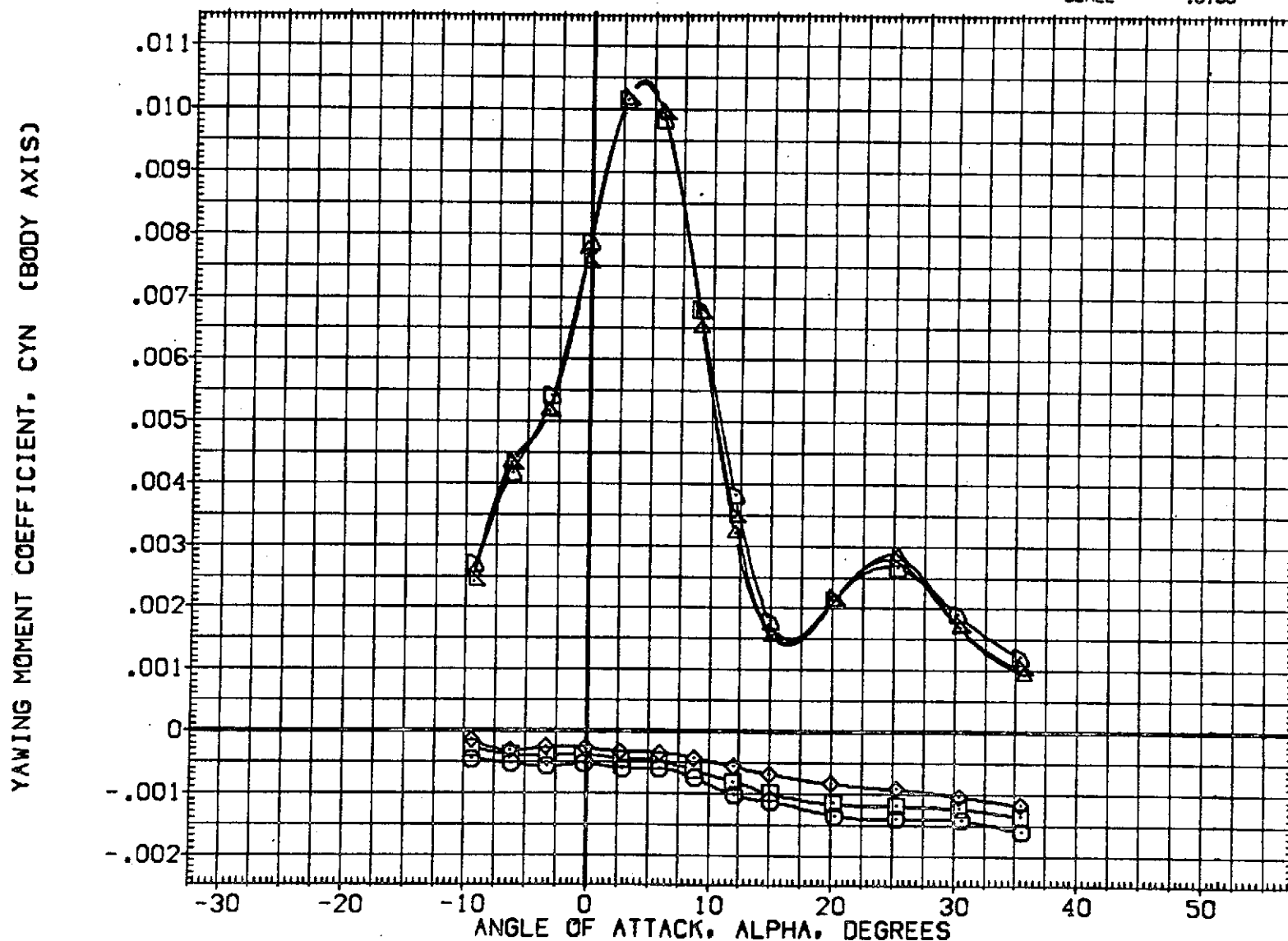


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 GR8 V/N53 RCS OFF | 150,000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLF05) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 125,000 | .000 | .000 | .000 | LREF 474.8100 IN. |
| (RHLF06) | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 RCS OFF | 100,000 | .000 | .000 | .000 | SREF 933.6300 IN. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) | 150,000 | 135.000 | 70.000 | 47.500 | XMRP 1078.7000 IN. |
| (RHL025) | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) | 125,000 | 129.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| (RHL026) | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) | 100,000 | 103.000 | 72.000 | 47.500 | ZMRP 975.0000 IN. |
| | | | | | | SCALE .0100 |

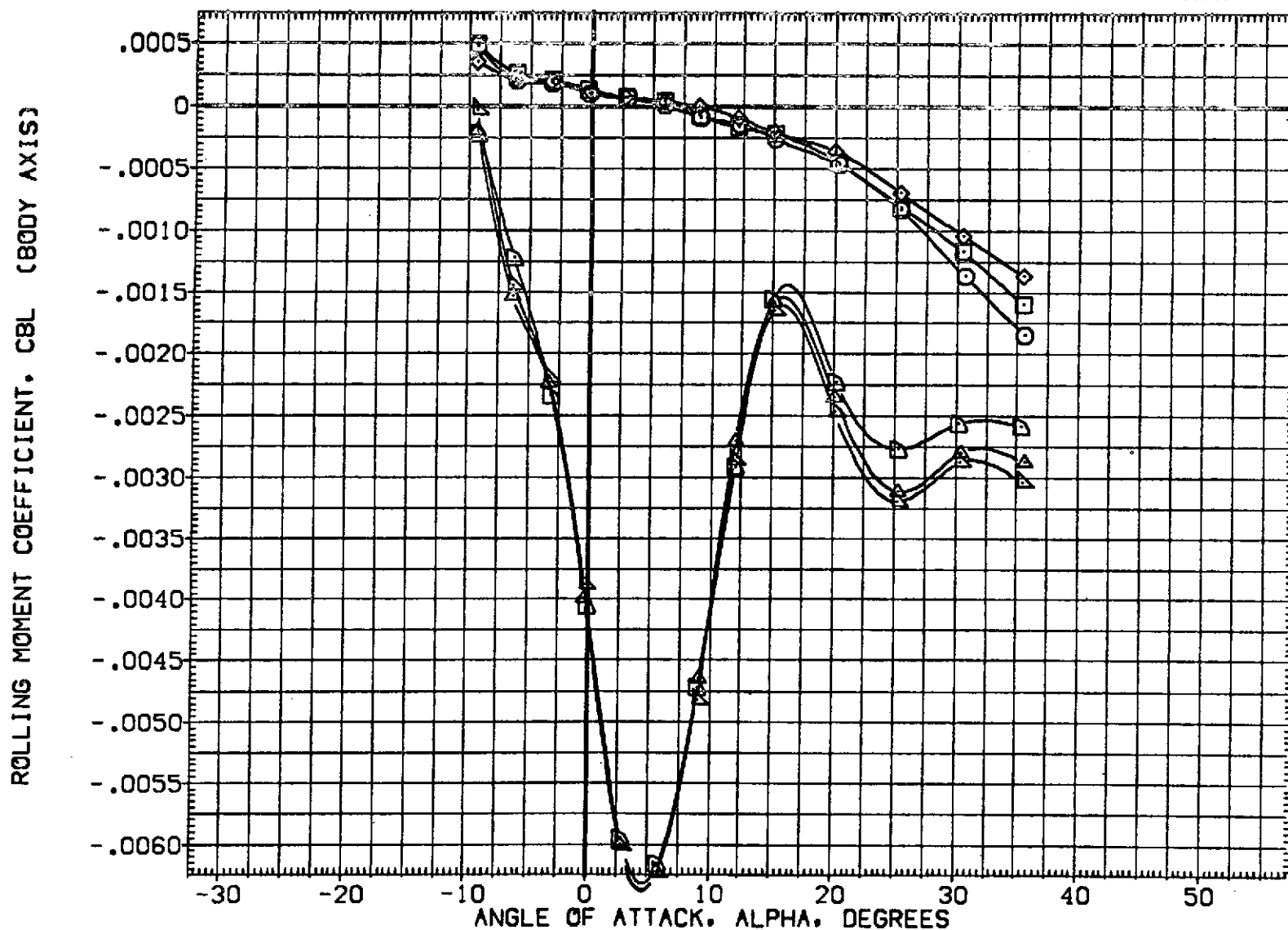


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|------------------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 GRB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHLF05) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 | RCS OFF | 125.000 | .000 | .000 | .000 | LREF | 474.8100 IN. |
| (RHLF06) | 0A82 CFHT113 MODEL 32-0 GRB V/N52 | RCS OFF | 100.000 | .000 | .000 | .000 | BREF | 936.6800 IN. |
| (RHL009) | 0A82 CFHT113 MODEL 32-0 GRB V/N52 | (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | XMRP | 1076.7000 IN. |
| (RHL025) | 0A82 CFHT113 MODEL 32-0 GRB V/N52 | (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | YMRP | .0000 IN. |
| (RHL026) | 0A82 CFHT113 MODEL 32-0 GRB V/N52 | (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | ZMRP | 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

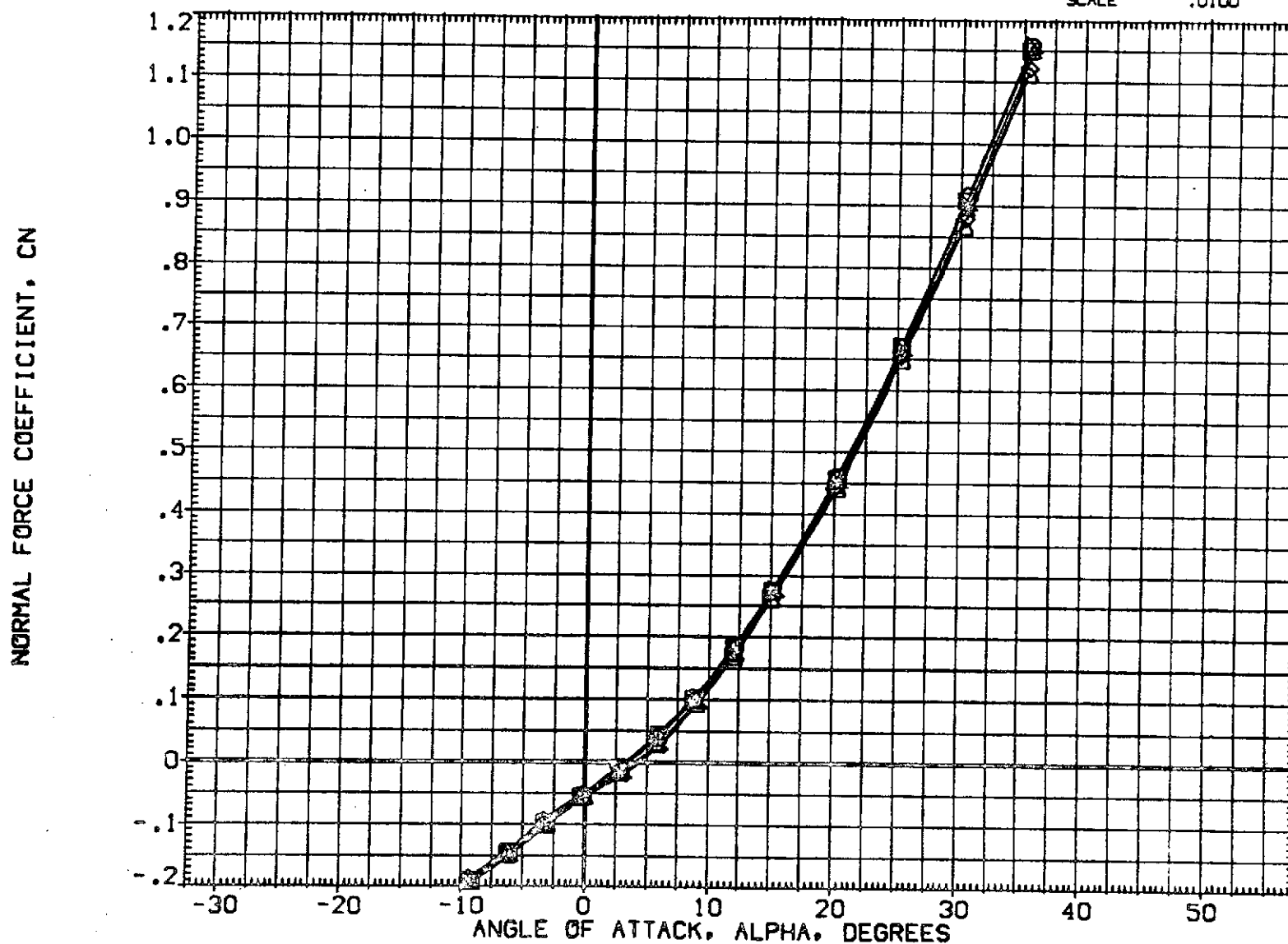


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT.

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 GRB V/N53 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLF05) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF 474.9100 IN. |
| (RHLF06) | QAB2 CFHT113 MODEL 32-0 GRB V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | BREF 935.6000 IN. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| (RHL025) | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| (RHL026) | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

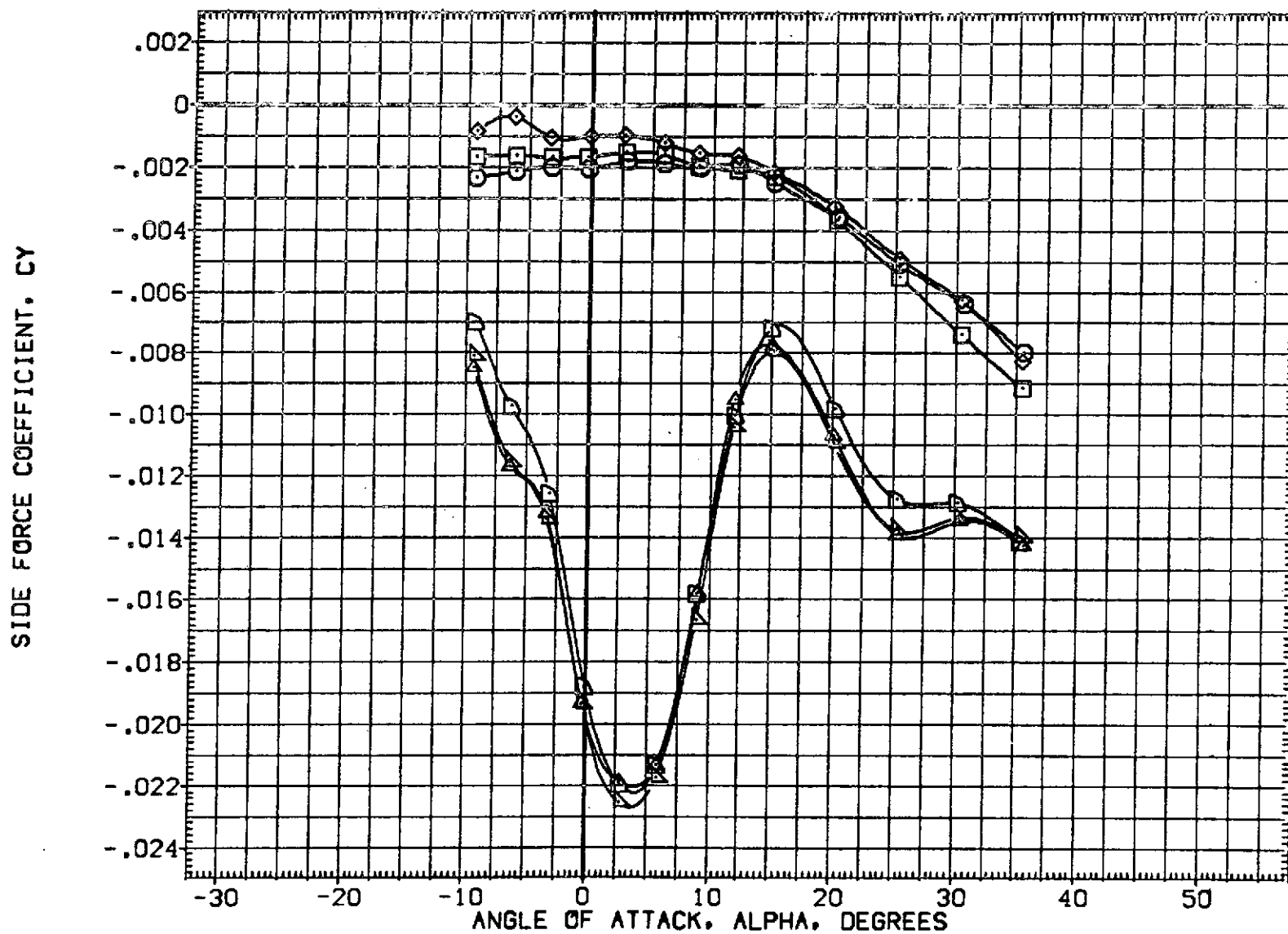


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLF05) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF 474.8100 IN. |
| (RHLF06) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | BREF 936.6800 IN. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| (RHL025) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 129.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| (RHL026) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 100.000 | 103.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

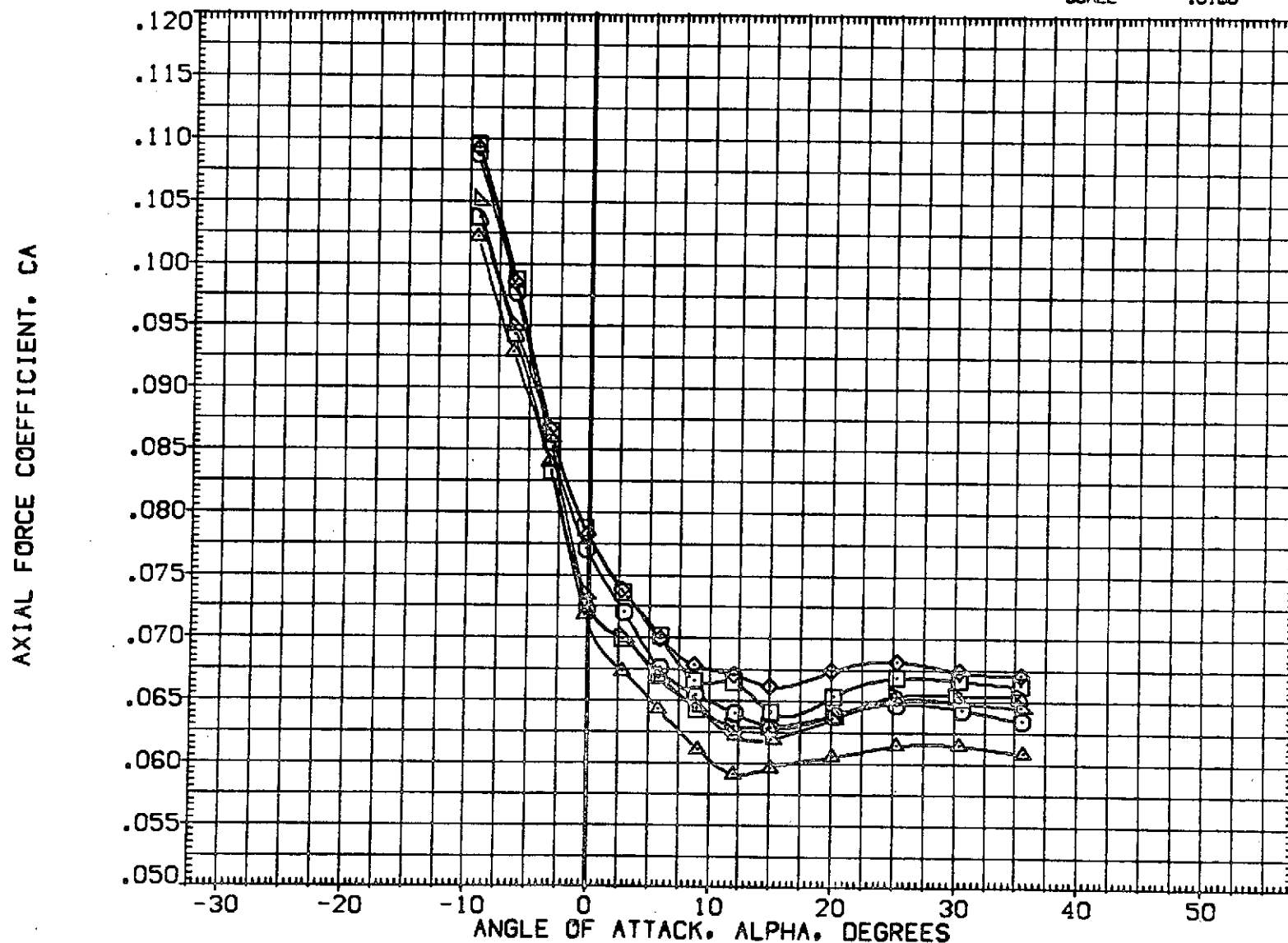


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC09) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| (CHLC25) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| (CHLC26) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 | 50.FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF | 474.0100 | IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

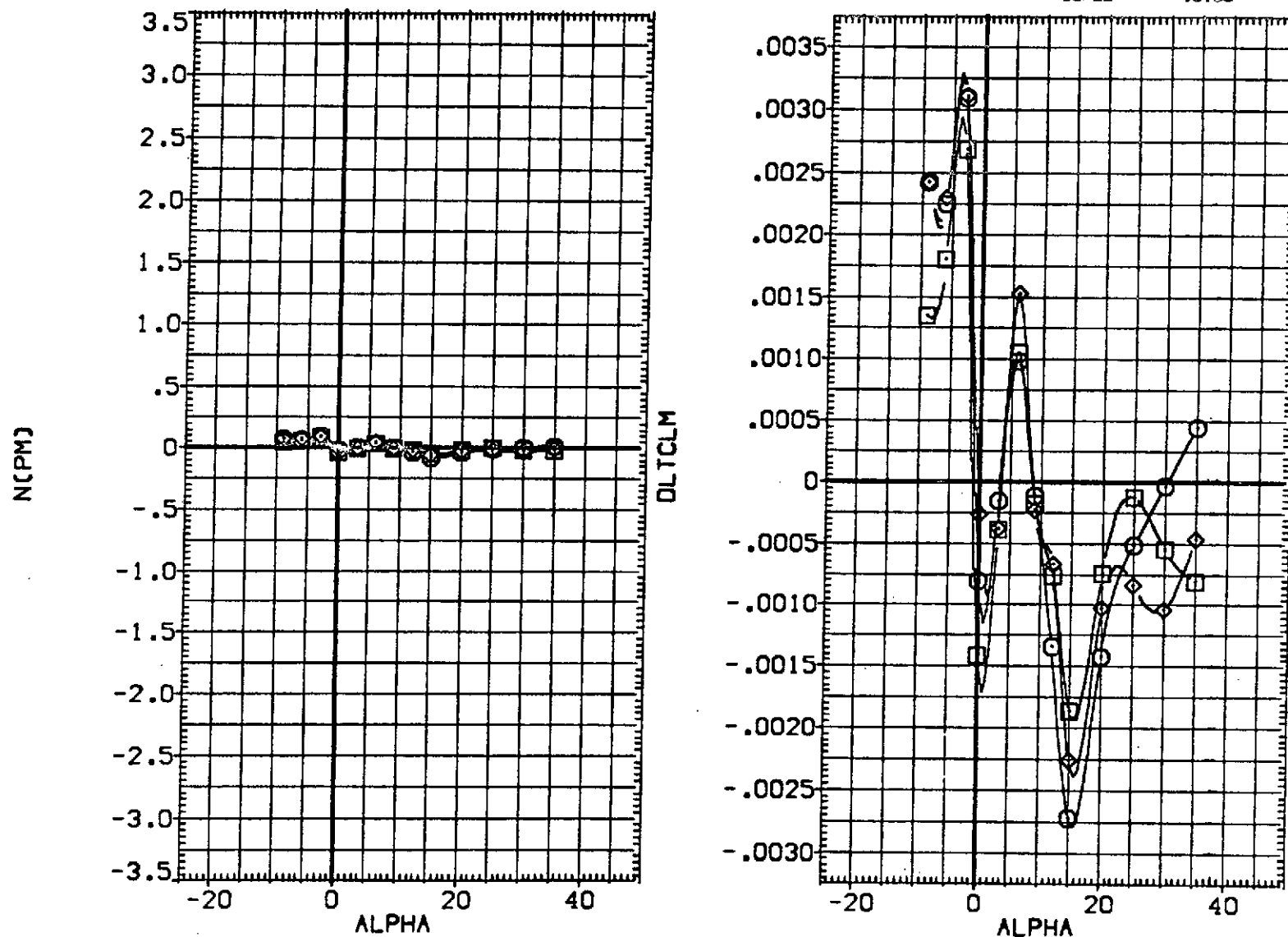


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC09] | 0AB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| [CHLC25] | 0AB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| [CHLC26] | 0AB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 55.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 29.000 | 72.000 | 47.500 | LREF | 474.8100 IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

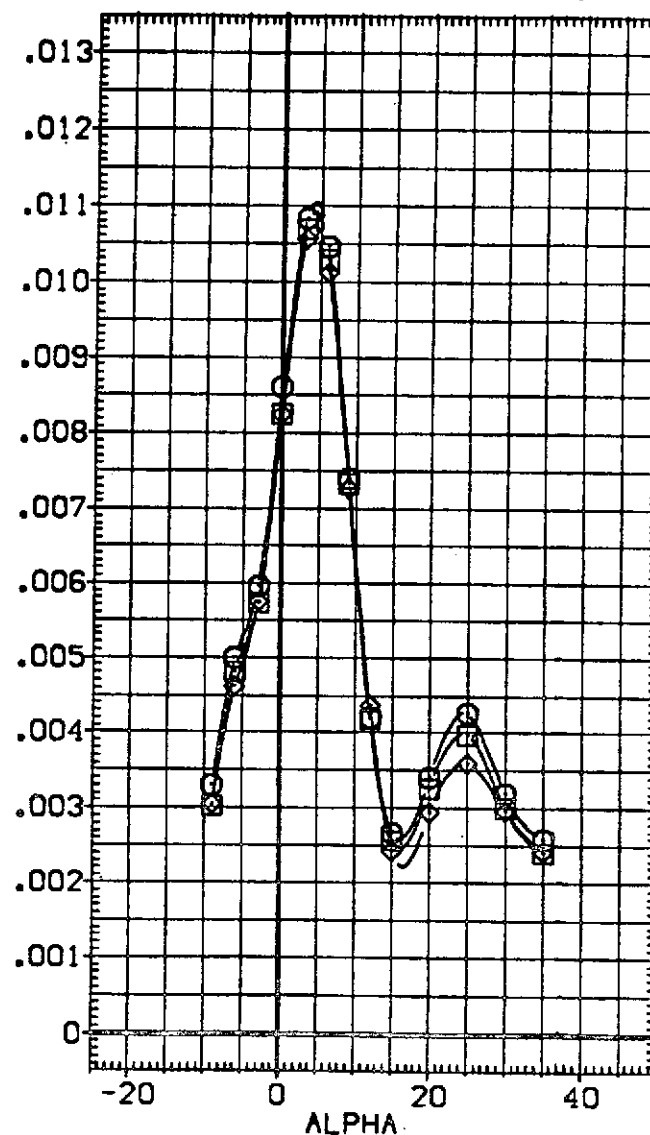
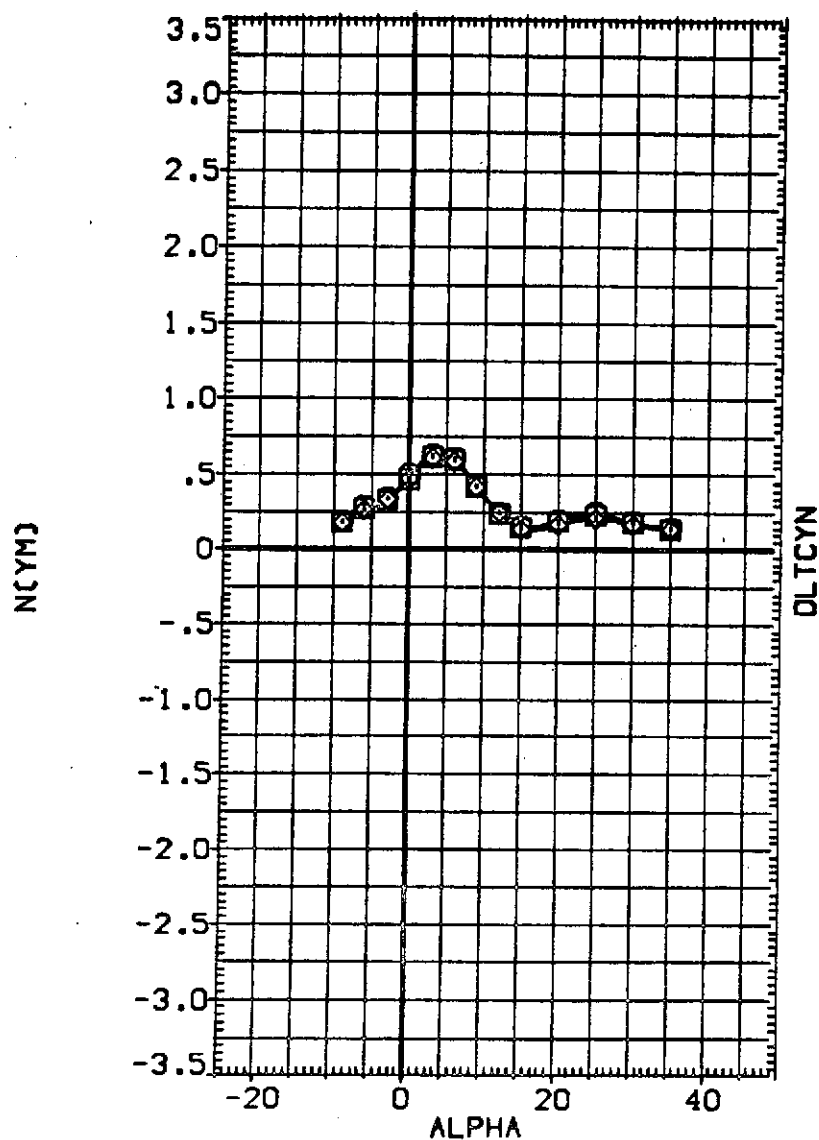


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC09] ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC25] □ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC26] ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF | 474.3100 IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

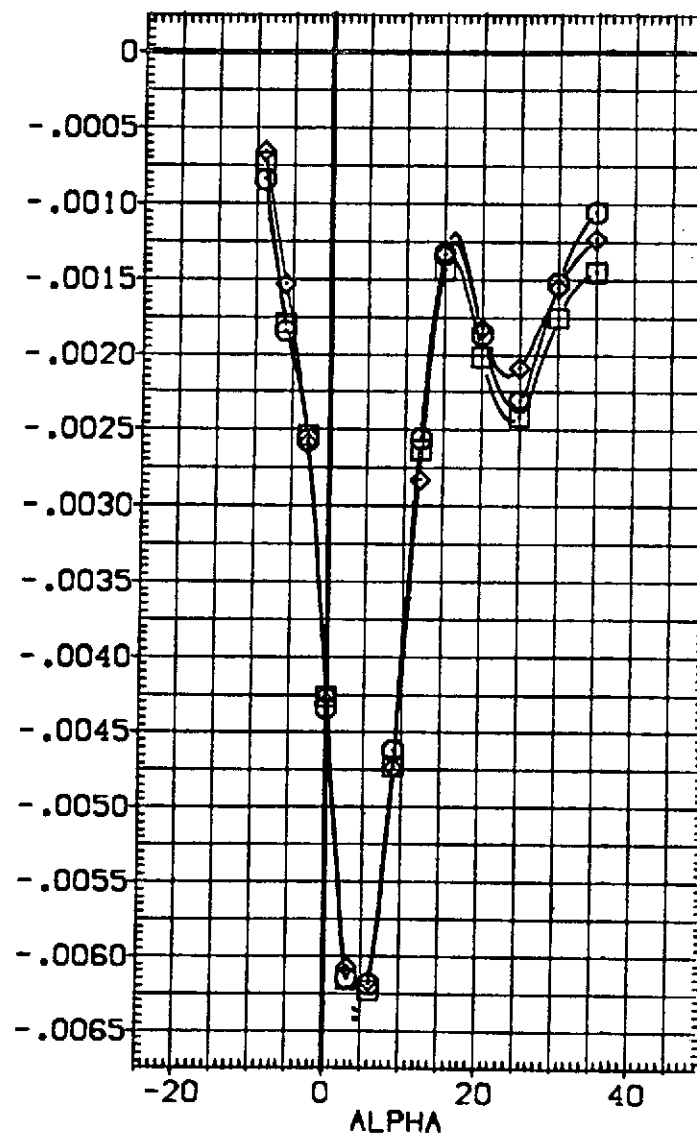
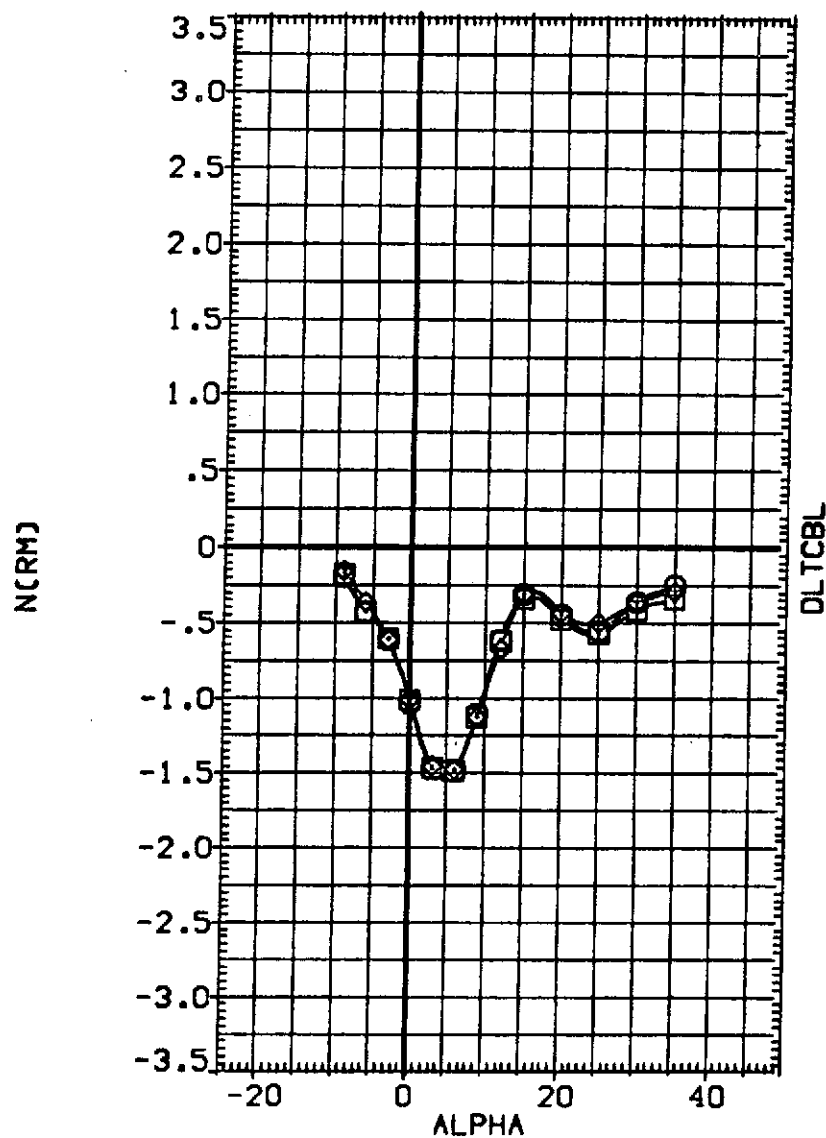


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC09] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | [AIR] |
| [CHLC25] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | [AIR] |
| [CHLC26] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | [AIR] |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF | 474.8100 IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

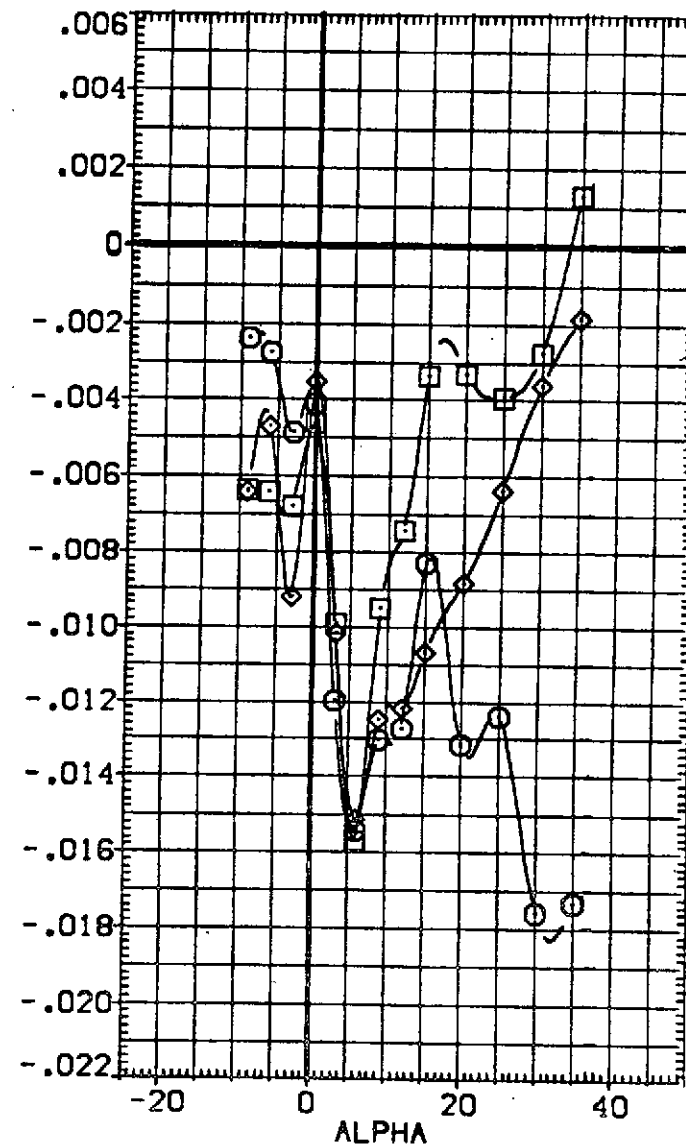
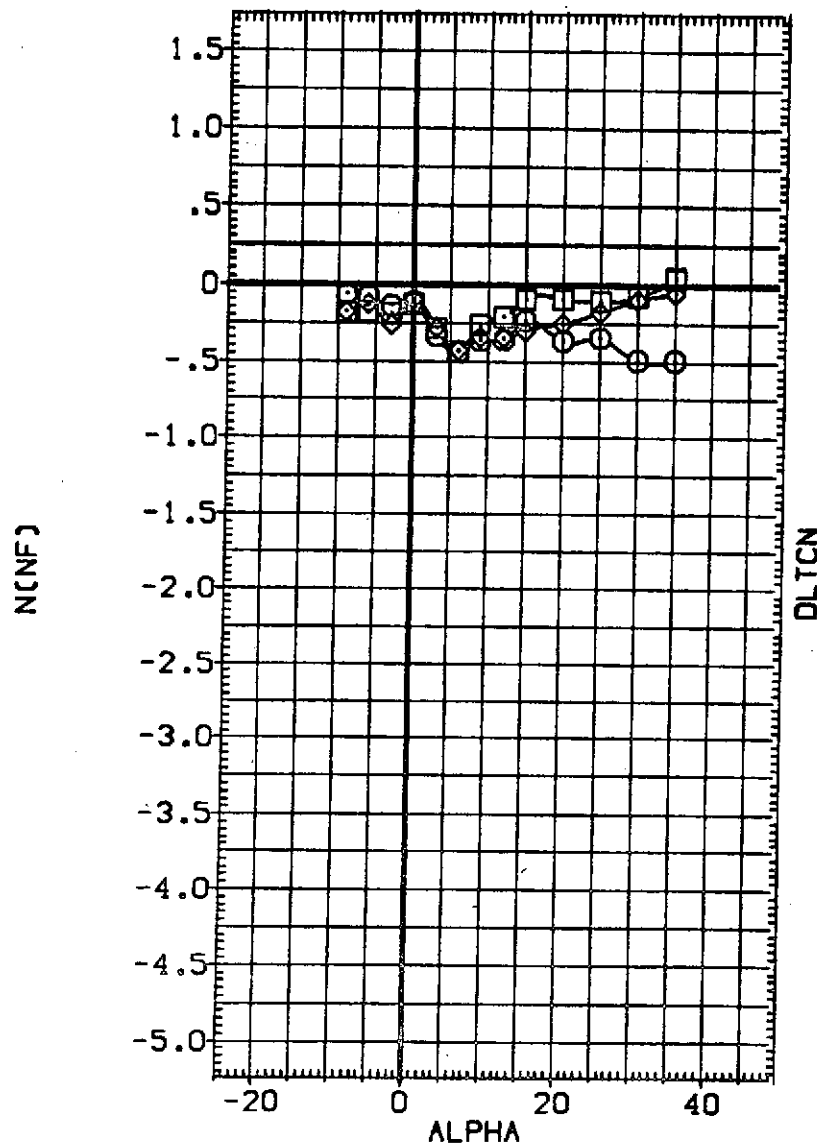


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC09] ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC25] □ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC26] ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |

| Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 155.000 | 70.000 | 47.500 | SREF | 2690.0000 | 90.FT. |
| 125.000 | 129.000 | 72.000 | 47.500 | LREF | 474.8100 | IN. |
| 100.000 | 103.000 | 72.000 | 47.500 | BREF | 935.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

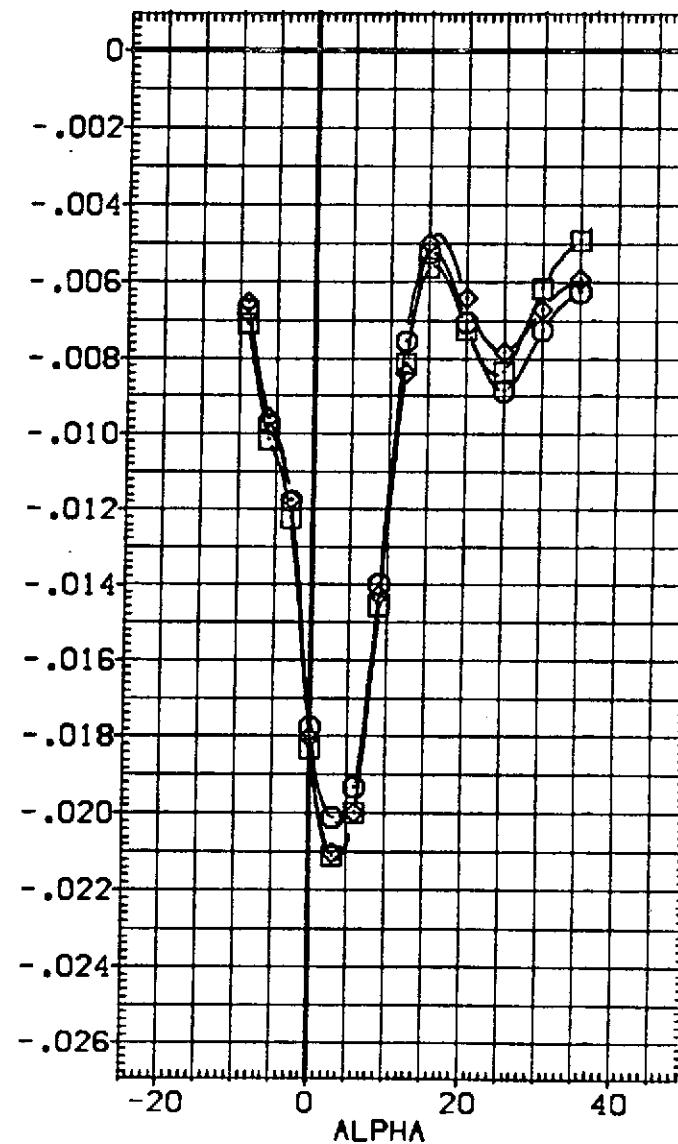
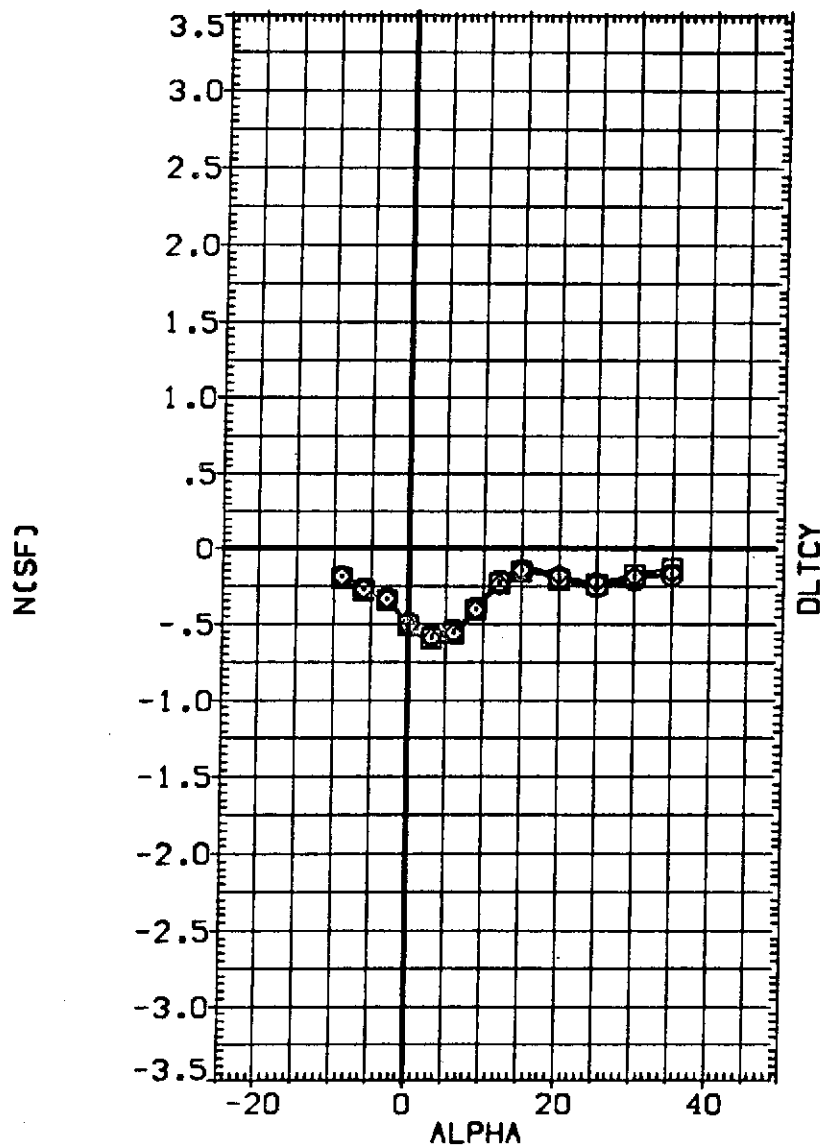


FIG. 20 EFFECT OF T/QA SIMULATION USING AIR WITH N52 JETS ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|---------|--------|--------|-----------------------|-----------|---------|
| (RHL04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL05) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | RCS OFF | 125.000 | .000 | .000 | .000 | LREF | 474.8100 | IN. |
| (RHL06) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 | RCS OFF | 100.000 | .000 | .000 | .000 | BREF | 936.6800 | IN. |
| (RHL011) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) | 150.000 | 150.000 | 70.000 | 47.500 | XMRP | 1076.7000 | IN. |
| (RHL024) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) | 125.000 | 131.000 | 72.000 | 47.500 | YMRP | .0000 | IN. |
| (RHL027) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 | (AIR) | 100.000 | 105.000 | 72.000 | 47.500 | ZMRP | 375.0000 | IN. |
| | | | | | | | SCALE | .0100 | |

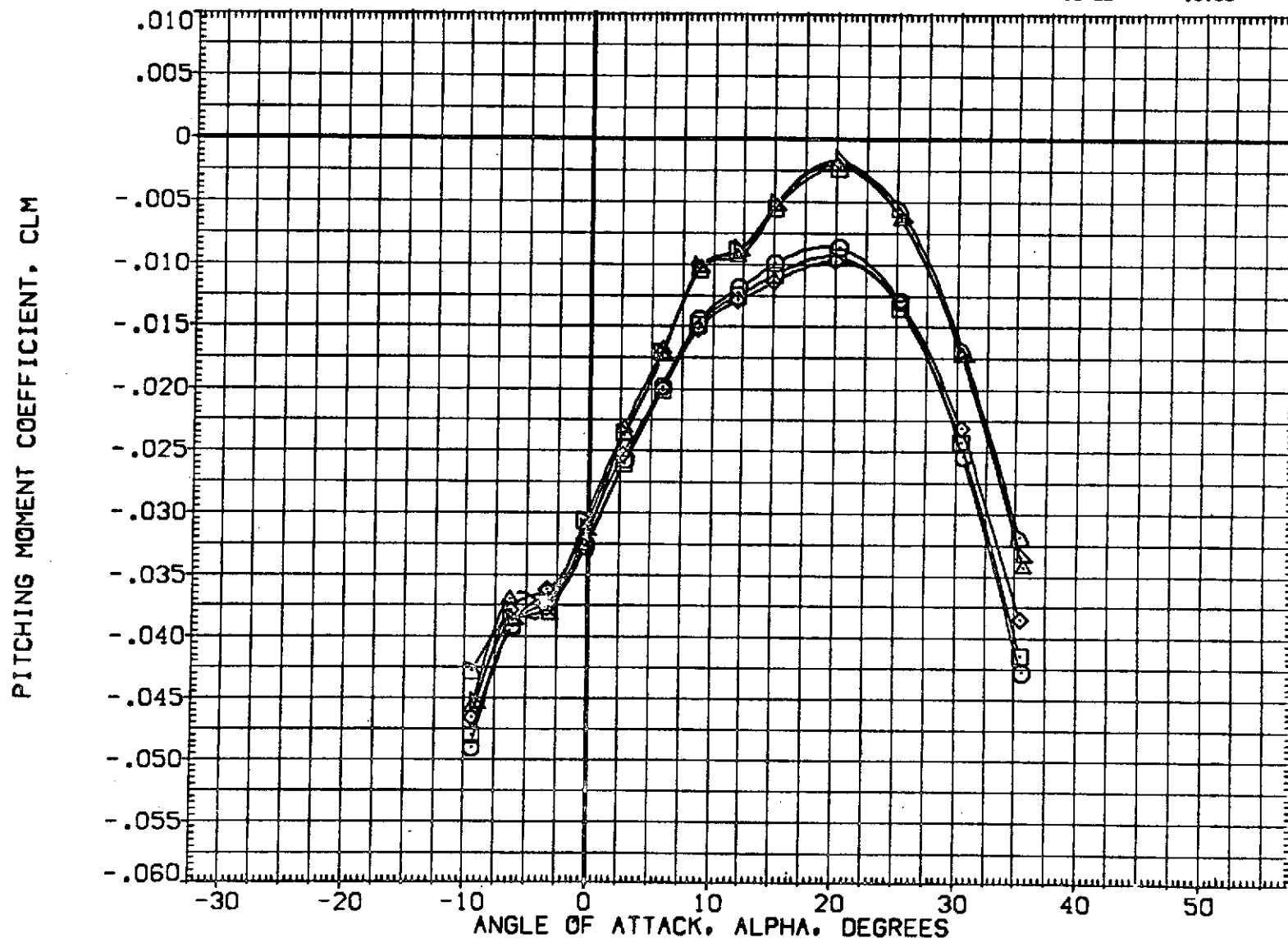


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| [RHLFO4] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2080.0000 SQ.FT. |
| [RHLFO5] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF 474.8100 IN. |
| [RHLFO6] | QAB2 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | BREF 936.6200 IN. |
| [RHL011] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| [RHL024] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 125.000 | 131.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| [RHL027] | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 100.000 | 105.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

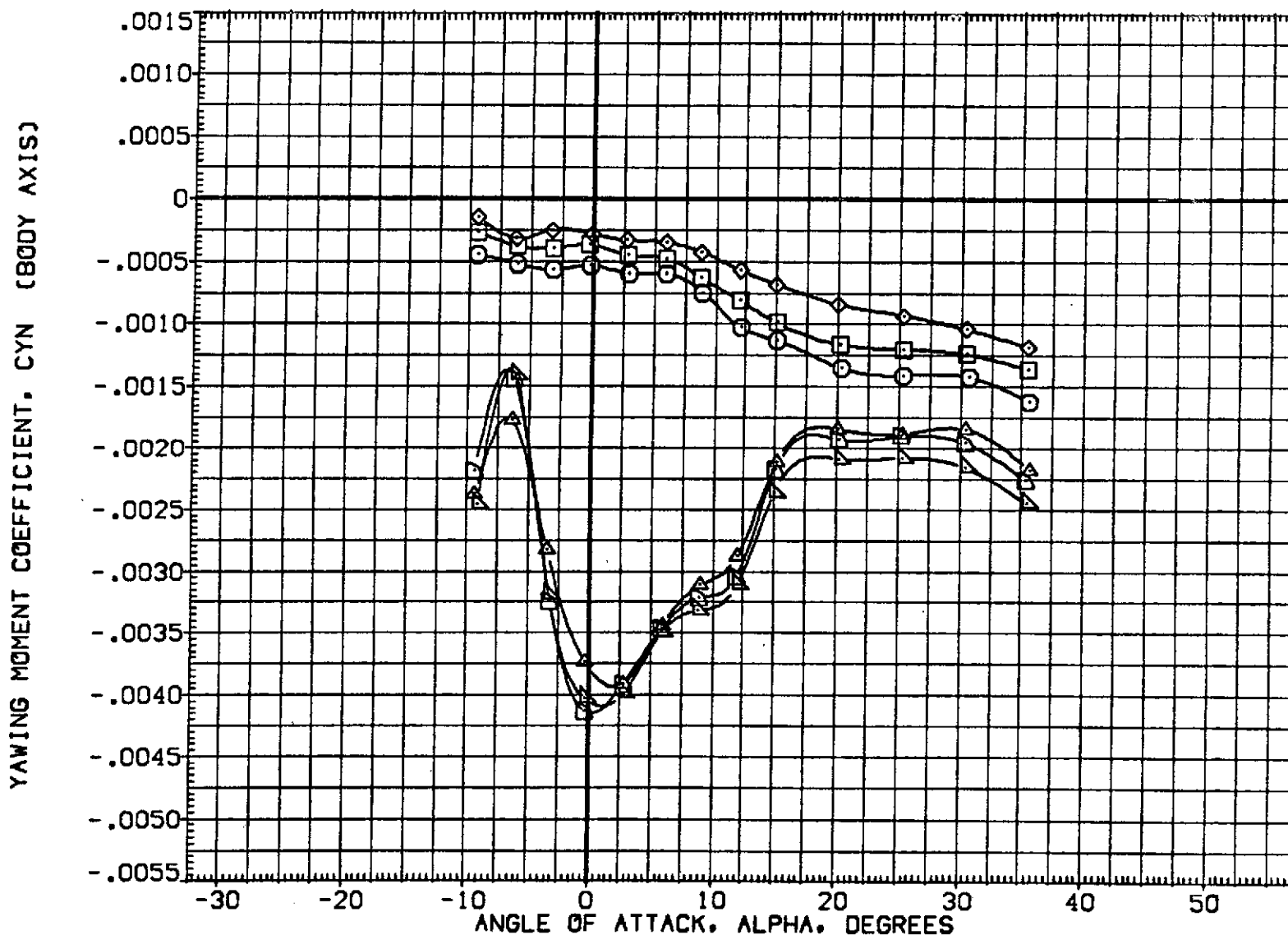


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|--------|-----------------------|-----------|--------|
| [RHLF04] | QA82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| [RHLF05] | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF | 474.8100 | IN. |
| [RHLF06] | QA82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | BREF | 936.6800 | IN. |
| [RHL011] | QA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP | 1076.7000 | IN. |
| [RHL024] | QA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 125.000 | 131.000 | 72.000 | 47.500 | YMRP | .0000 | IN. |
| [RHL027] | QA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 100.000 | 105.000 | 72.000 | 47.500 | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

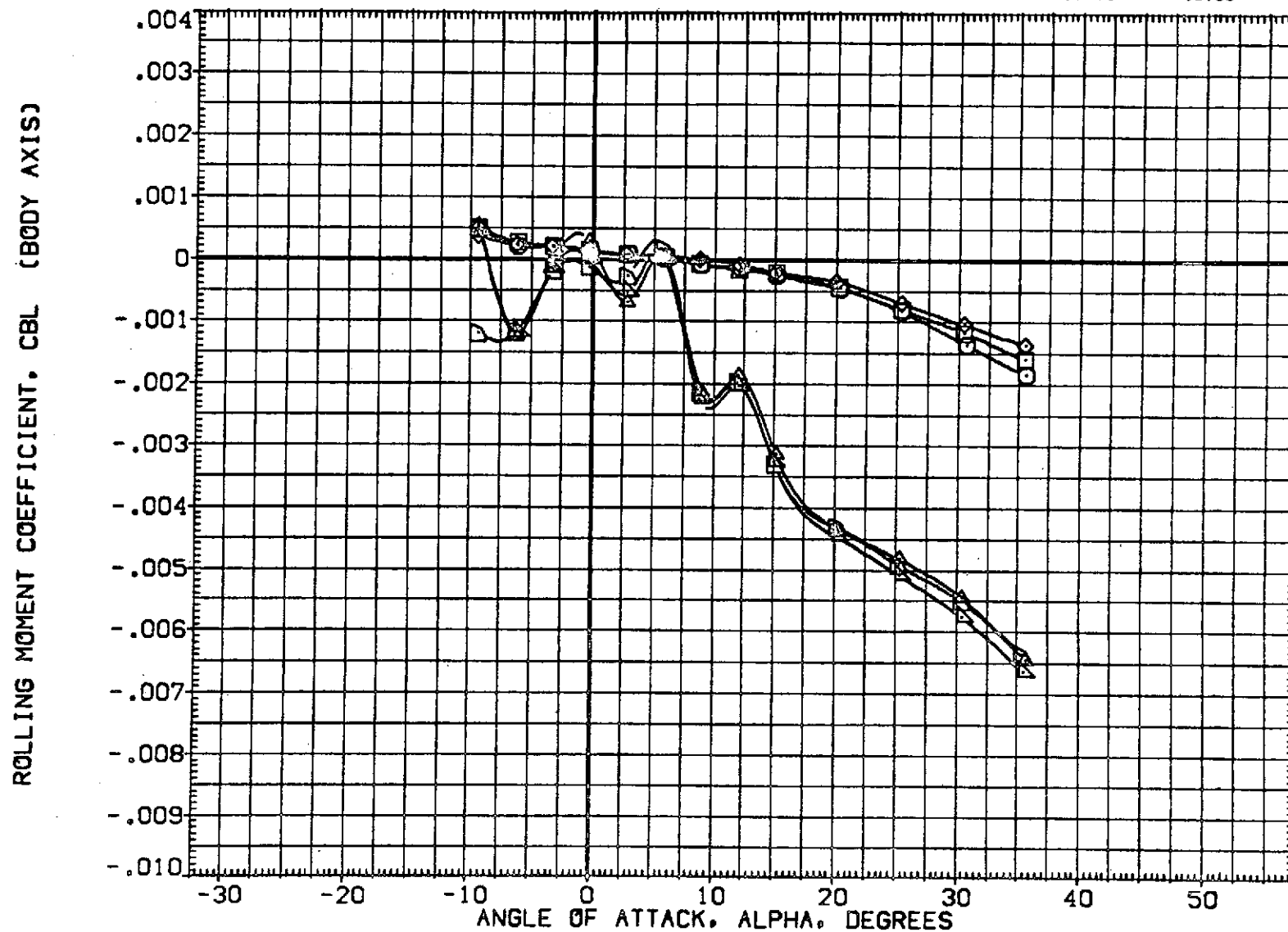


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|--------|-----------------------|-----------|--------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHLF05) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF | 474.8100 | IN. |
| (RHLF06) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | BREF | 936.6800 | IN. |
| (RHL011) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMPP | 1076.7000 | IN. |
| (RHL024) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 125.000 | 131.000 | 72.000 | 47.500 | YMPP | .0000 | IN. |
| (RHL027) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 100.000 | 105.000 | 72.000 | 47.500 | ZMPP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

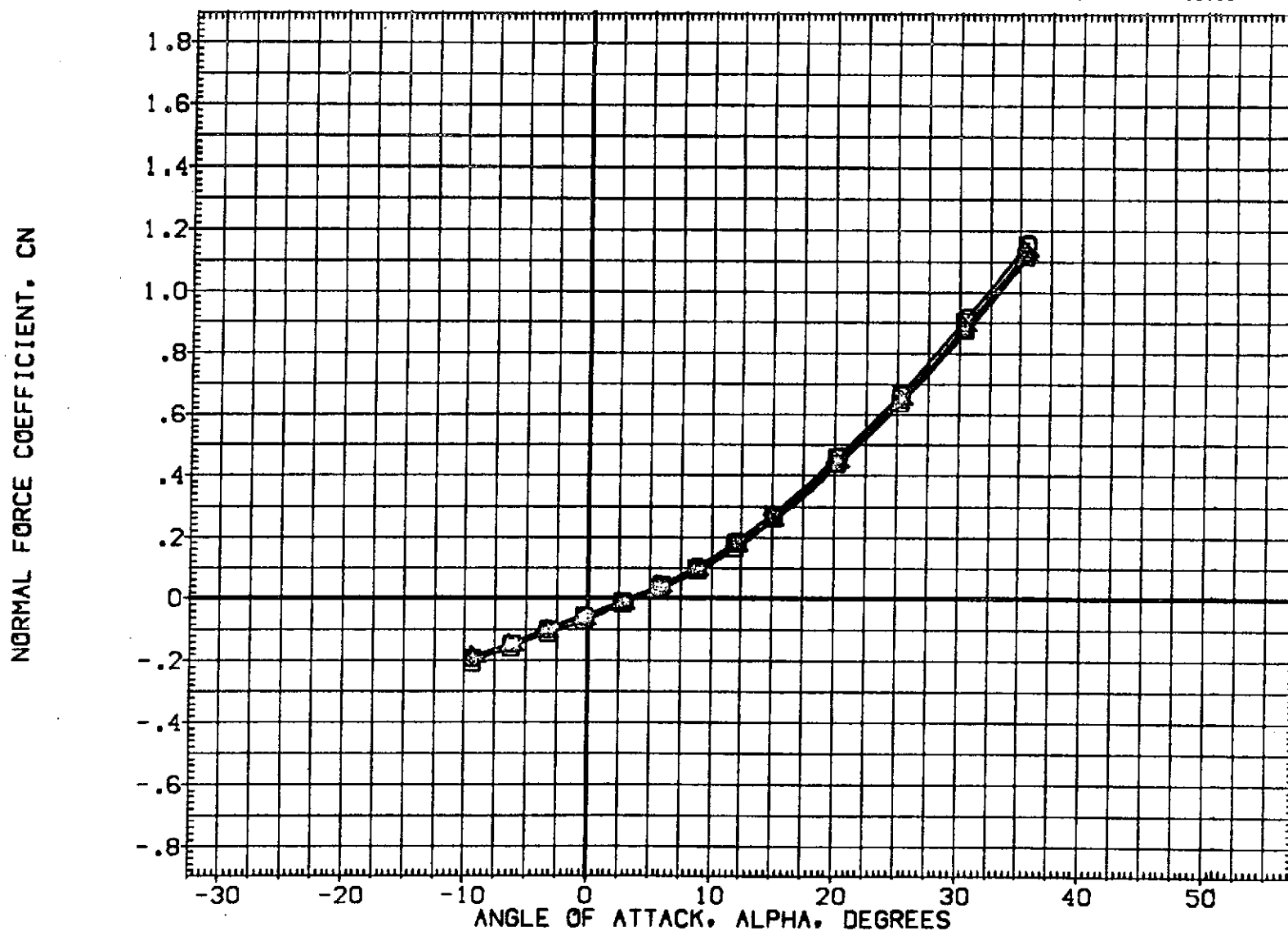


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| (RHLF04) | QA82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLF05) | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF 474.8100 IN. |
| (RHLF06) | QA82 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | BREF 936.6800 IN. |
| (RHL011) | QA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| (RHL024) | QA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 125.000 | 131.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| (RHL027) | QA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 100.000 | 105.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

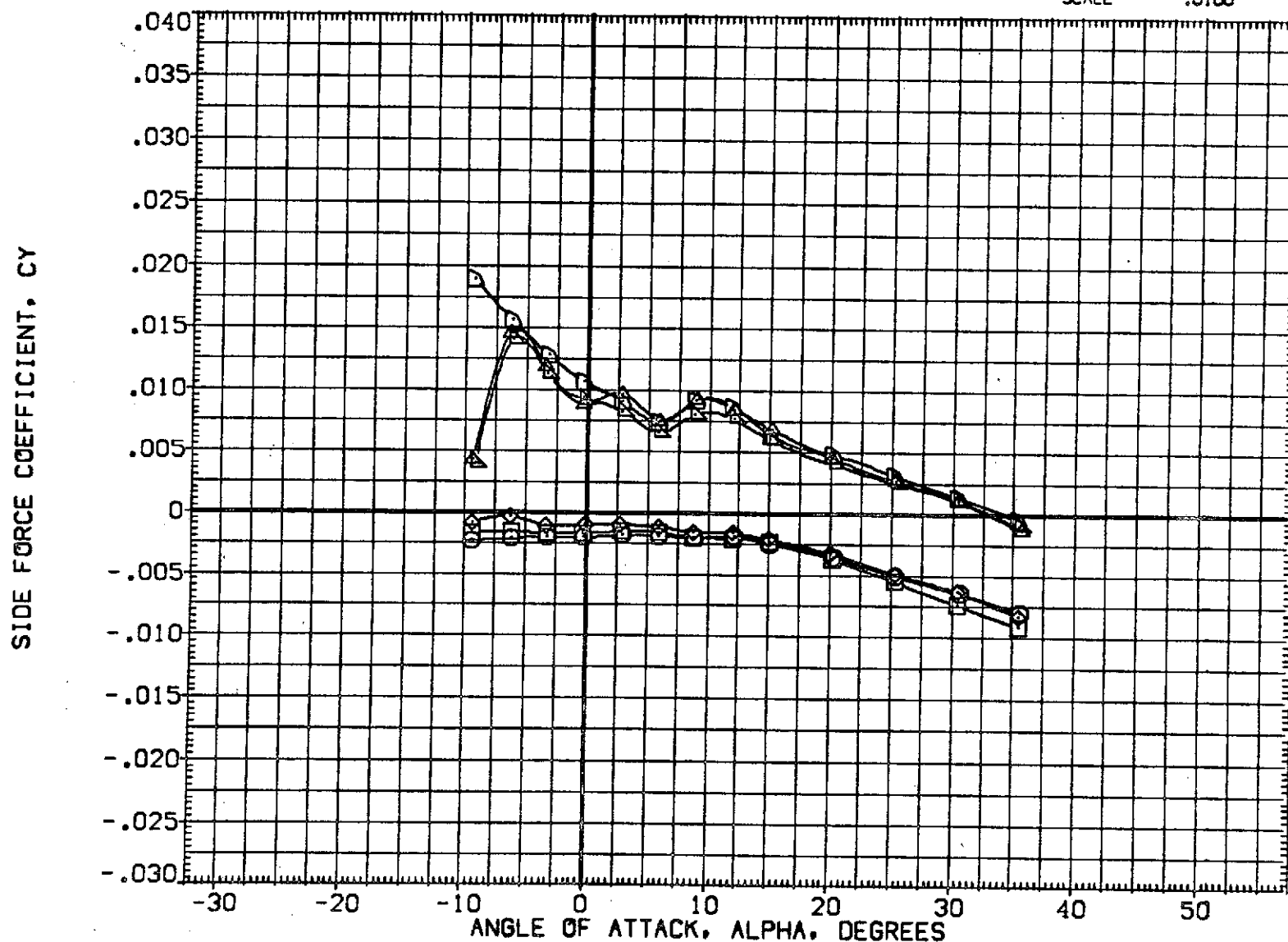


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.33

6-4

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|--------|-----------------------|
| [RHLF04] | QAB2 CFHT113 MODEL 32-0 OR8 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [RHLF05] | QAB2 CFHT113 MODEL 32-0 OR8 V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | LREF 474.8100 IN. |
| [RHLF06] | QAB2 CFHT113 MODEL 32-0 OR8 V/N52 RCS OFF | 100.000 | .000 | .000 | .000 | BREF 936.5800 IN. |
| [RHL011] | QAB2 CFHT113 MODEL 32-0 OR8 V/N85 (AIR) | 150.000 | 158.000 | 70.000 | 47.500 | XMRP 1076.7000 IN. |
| [RHL024] | QAB2 CFHT113 MODEL 32-0 OR8 V/N85 (AIR) | 125.000 | 131.000 | 72.000 | 47.500 | YMRP .0000 IN. |
| [RHL027] | QAB2 CFHT113 MODEL 32-0 OR8 V/N85 (AIR) | 100.000 | 105.000 | 72.000 | 47.500 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

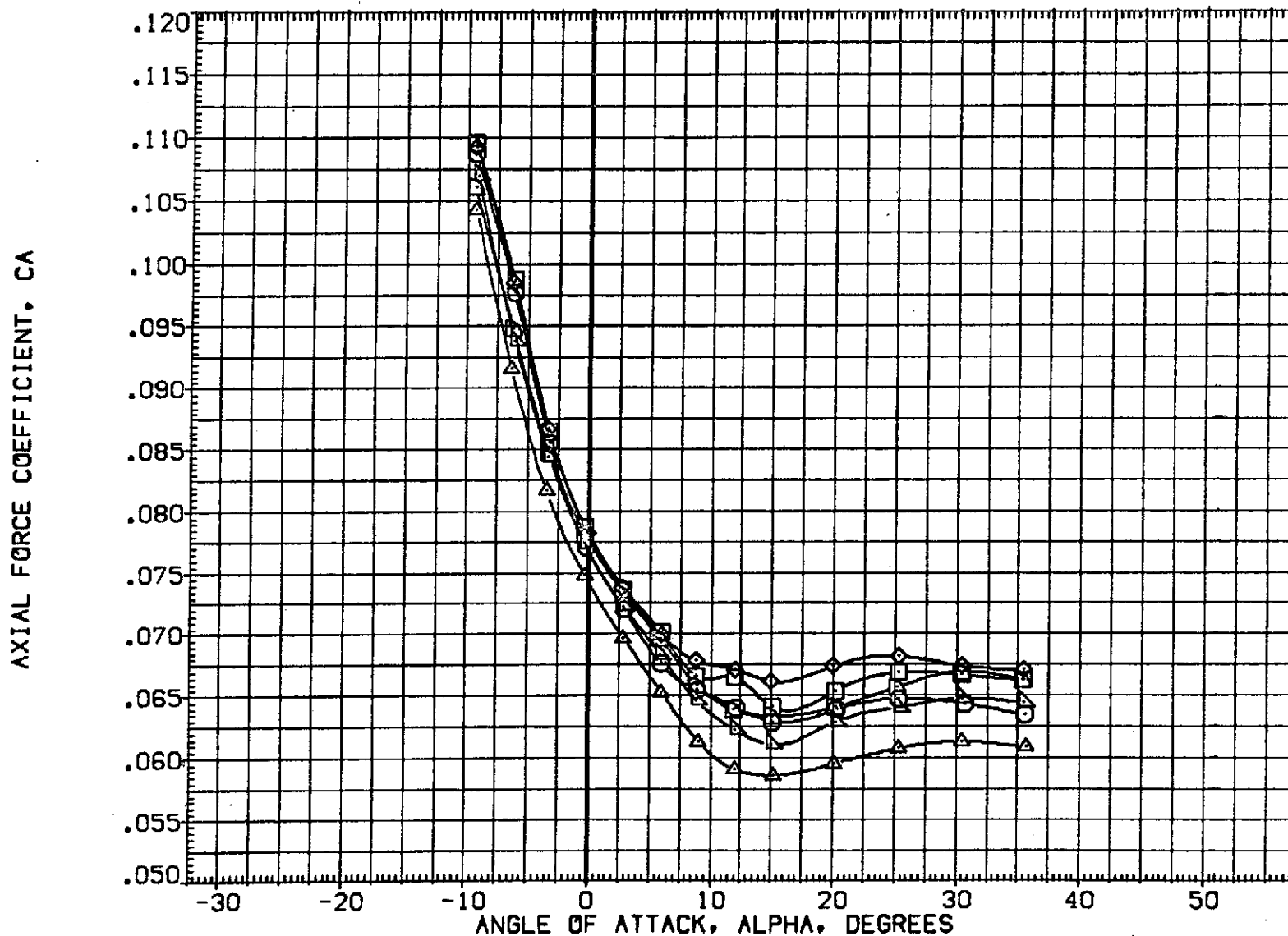


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC11) | GA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |
| (CHLC24) | GA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |
| (CHLC27) | GA82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|--------|-----------------------|
| 150.000 | 159.000 | 70.000 | 47.500 | SREF 2690.0000 50.FT. |
| 125.000 | 131.000 | 72.000 | 47.500 | LREF 474.8100 IN. |
| 100.000 | 105.000 | 72.000 | 47.500 | BREF 936.6800 IN. |
| | | | | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

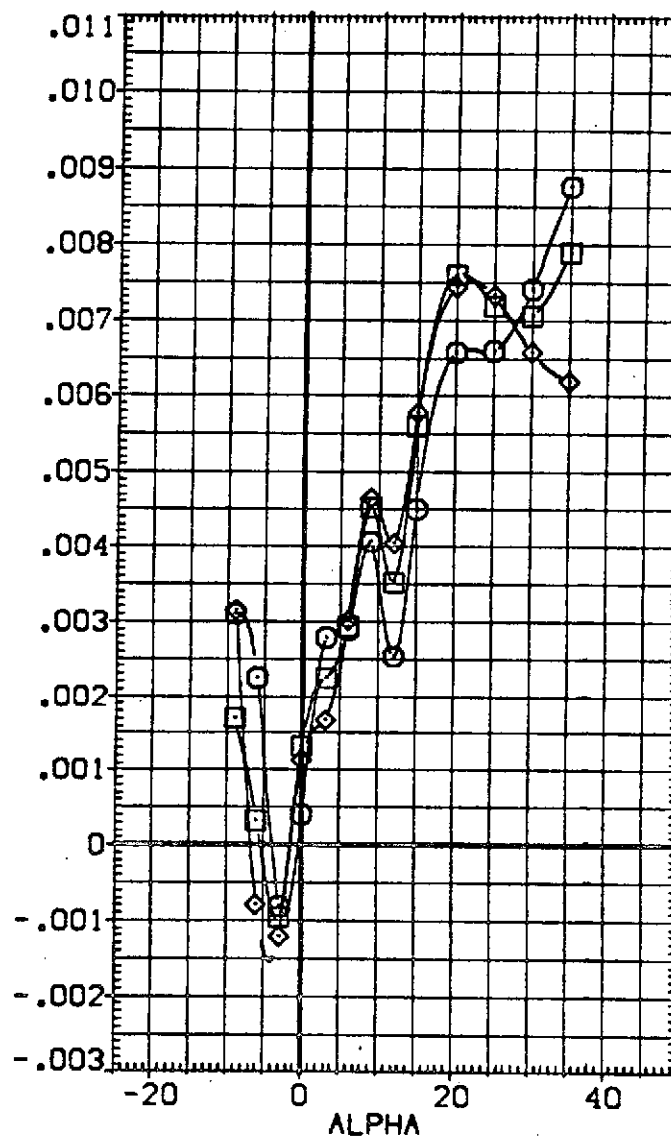
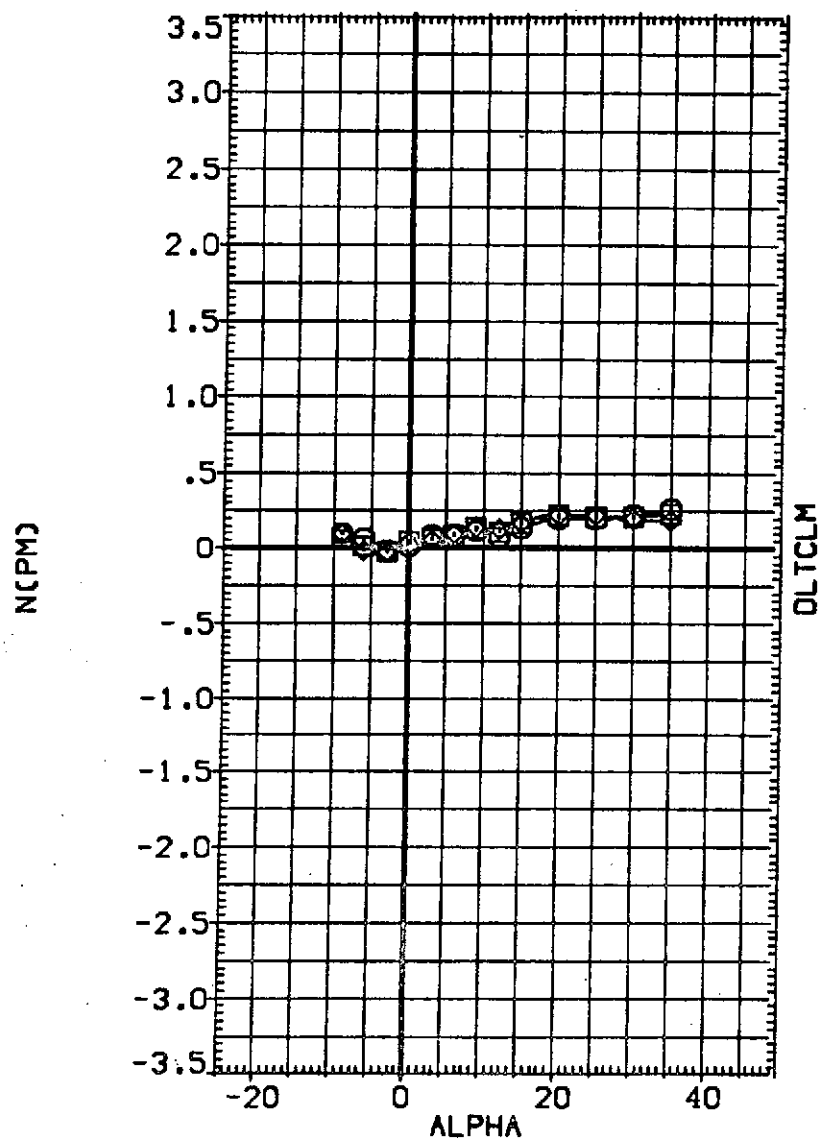


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| {CHLC11} | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |
| {CHLC24} | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |
| {CHLC27} | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |

| Q(PSF) | PERCS | TCRCS | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|--------|-----------------------|
| 150,000 | 158,000 | 70,000 | 47.500 | SREF 2690.0000 SQ.FT. |
| 125,000 | 131,000 | 72,000 | 47.500 | LREF 474.8100 IN. |
| 100,000 | 105,000 | 72,000 | 47.500 | BREF 938.6500 IN. |
| | | | | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

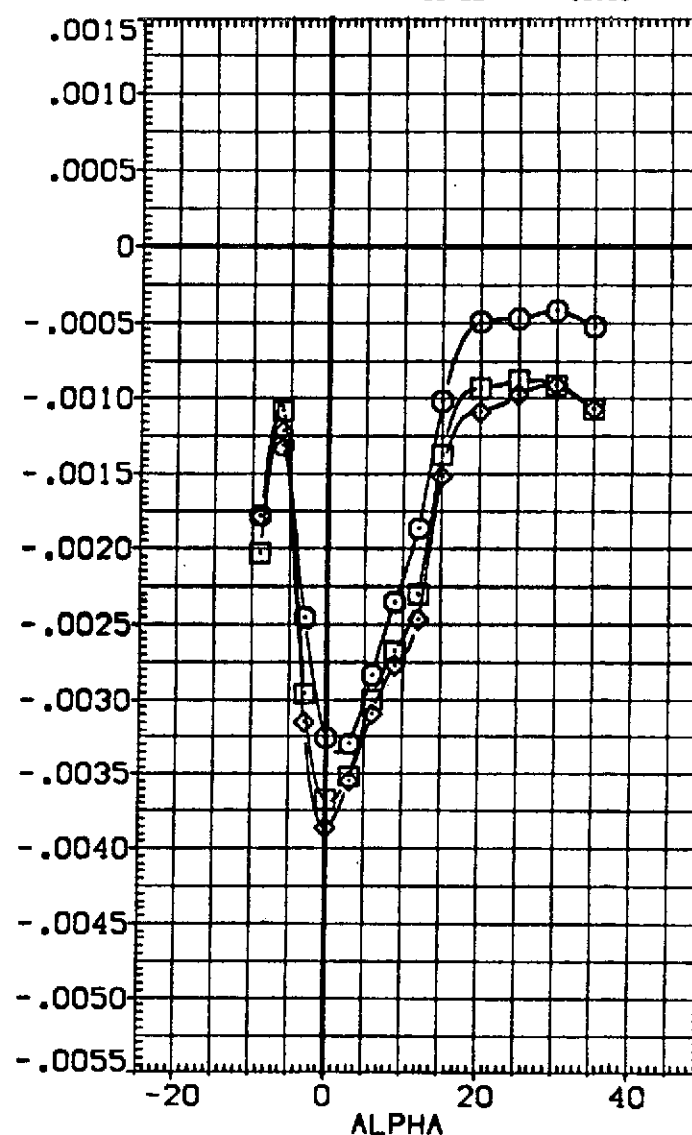
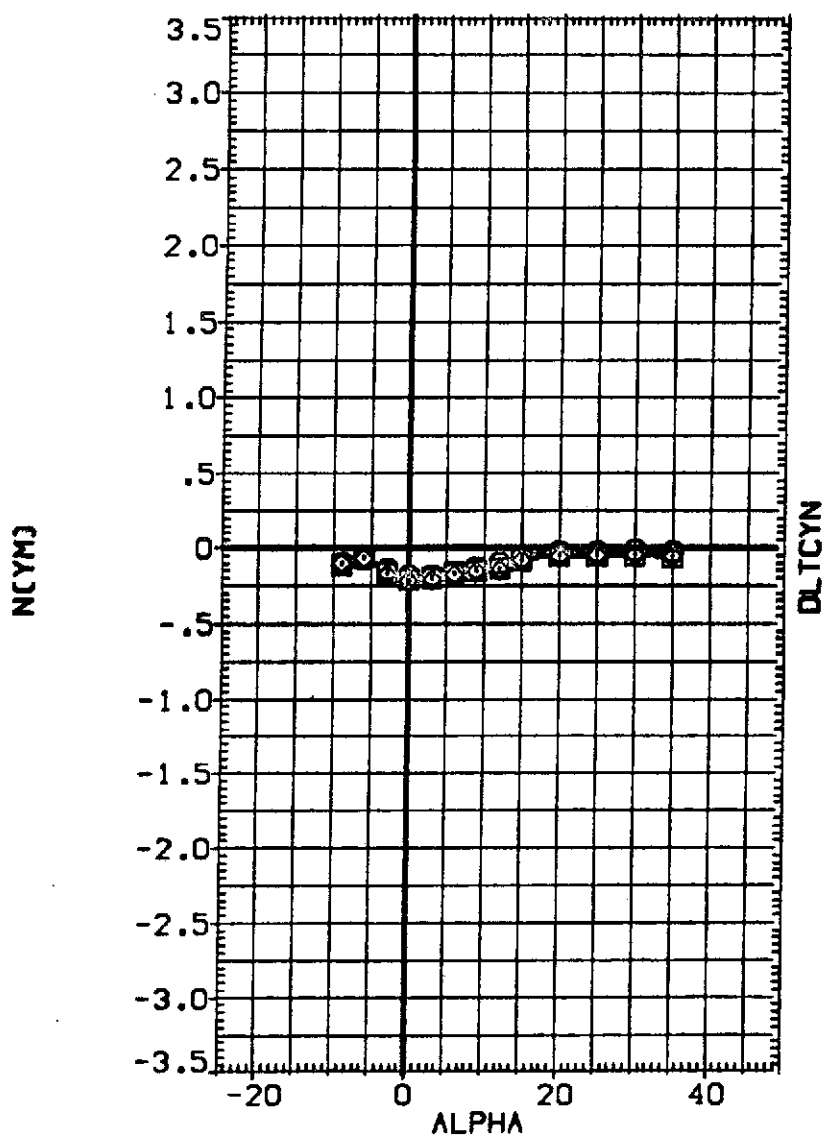


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC11) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |
| (CHLC24) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |
| (CHLC27) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|--------|-----------------------|-----------|--------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 | 50.FT. |
| 125.000 | 131.000 | 72.000 | 47.500 | LREF | 474.8100 | IN. |
| 100.000 | 105.000 | 72.000 | 47.500 | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

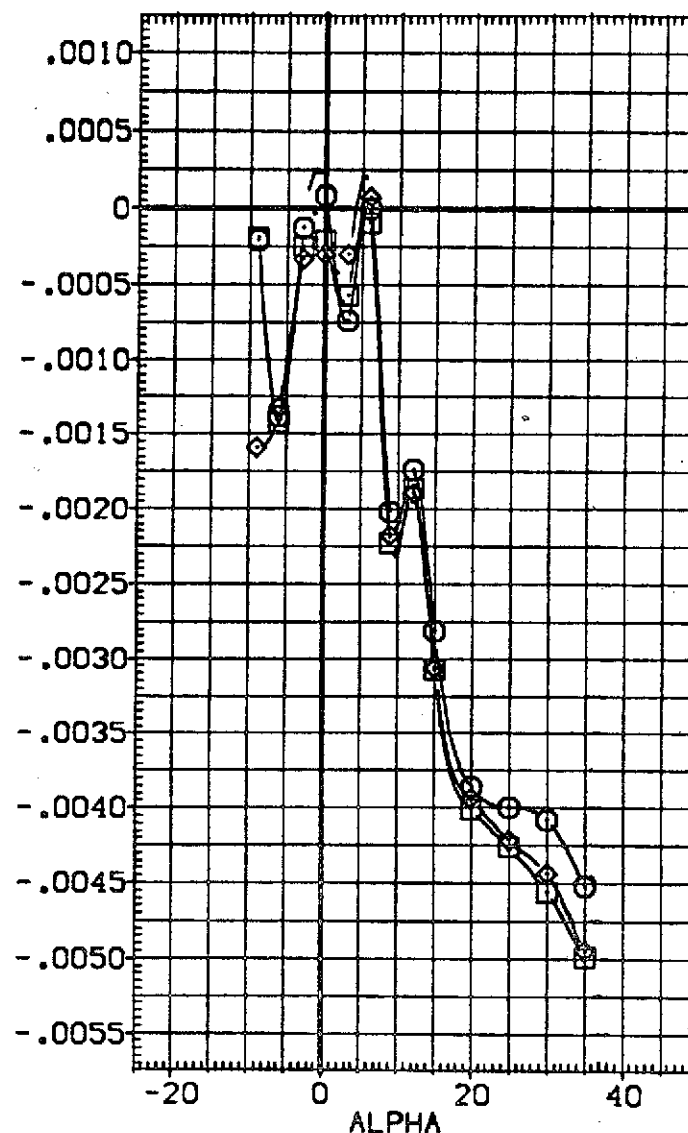
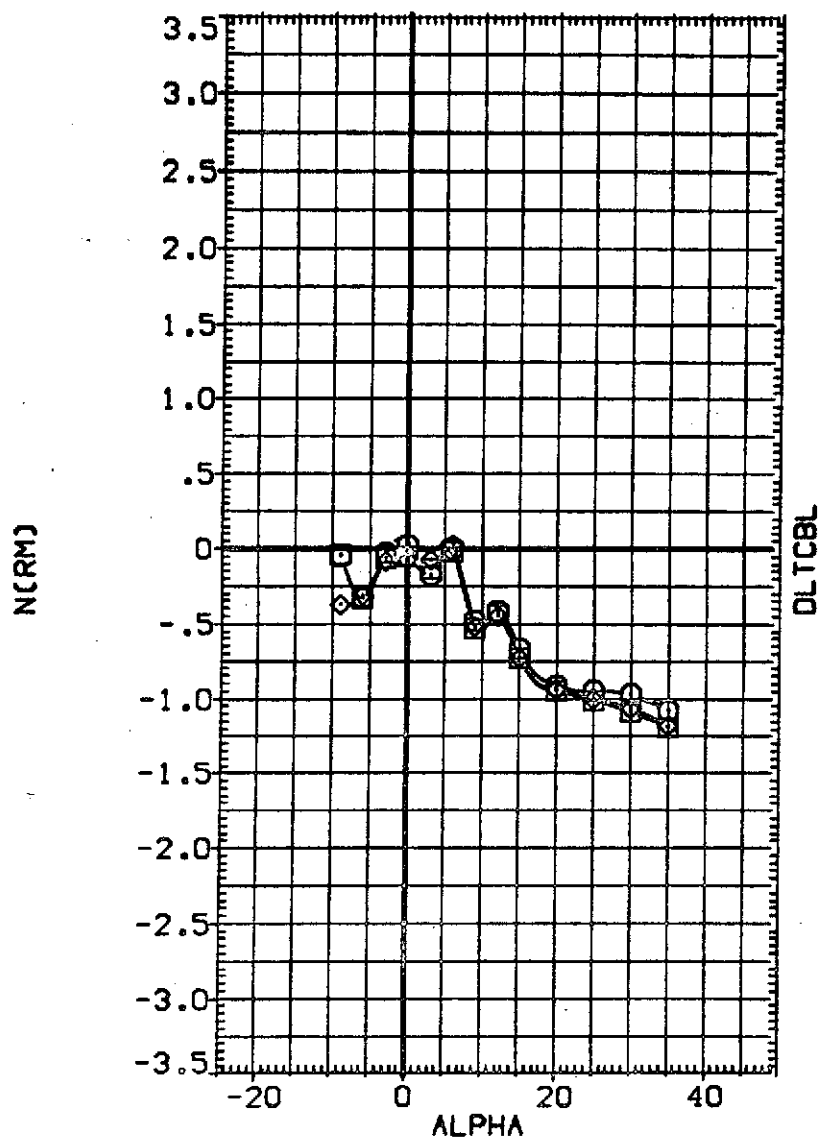


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC11) | 0A82 CFHT113 MODEL 32-0 OR8 W/N85 | (AIR) |
| (CHLC24) | 0A82 CFHT113 MODEL 32-0 OR8 W/N85 | (AIR) |
| (CHLC27) | 0A82 CFHT113 MODEL 32-0 OR8 W/N85 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|--------|-----------------------|
| 150.000 | 159.000 | 70.000 | 47.500 | SREF 2690.0000 SQ.FT. |
| 125.000 | 131.000 | 72.000 | 47.500 | LREF 474.8100 IN. |
| 100.000 | 105.000 | 72.000 | 47.500 | BREF 936.6800 IN. |
| | | | | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

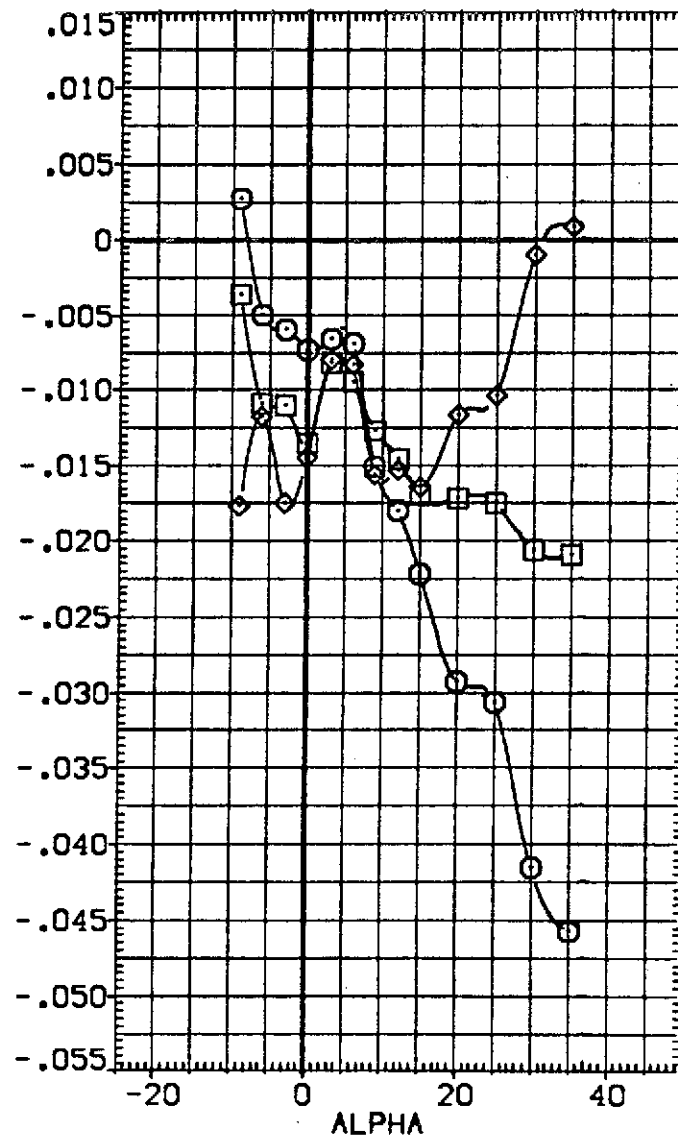
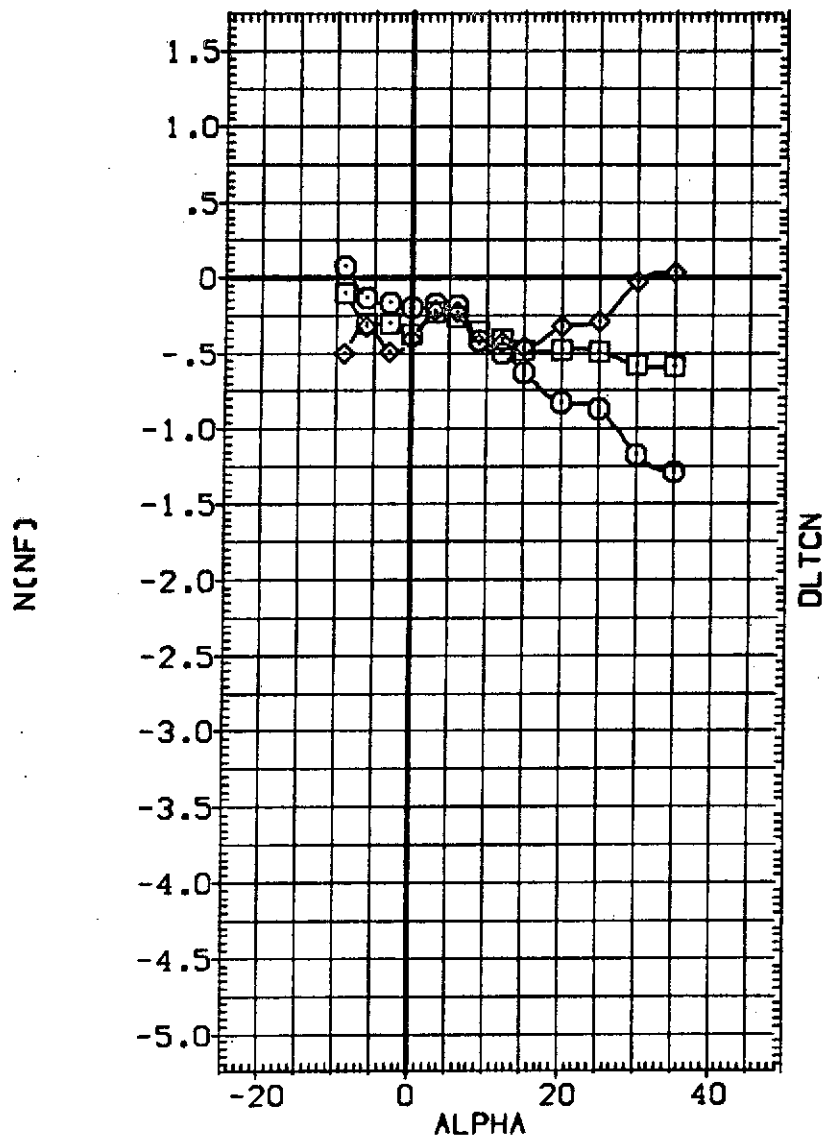


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC11) | 0A82 CFHT113 MODEL 32-0 DRB V/N85 | (AIR) |
| (CHLC24) | 0A82 CFHT113 MODEL 32-0 DRB V/N85 | (AIR) |
| (CHLC27) | 0A82 CFHT113 MODEL 32-0 DRB V/N85 | (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|--------|-----------------------|------------------|
| 150.000 | 158.000 | 70.000 | 47.500 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 131.000 | 72.000 | 47.500 | LREF | 474.8100 IN. |
| 100.000 | 105.000 | 72.000 | 47.500 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

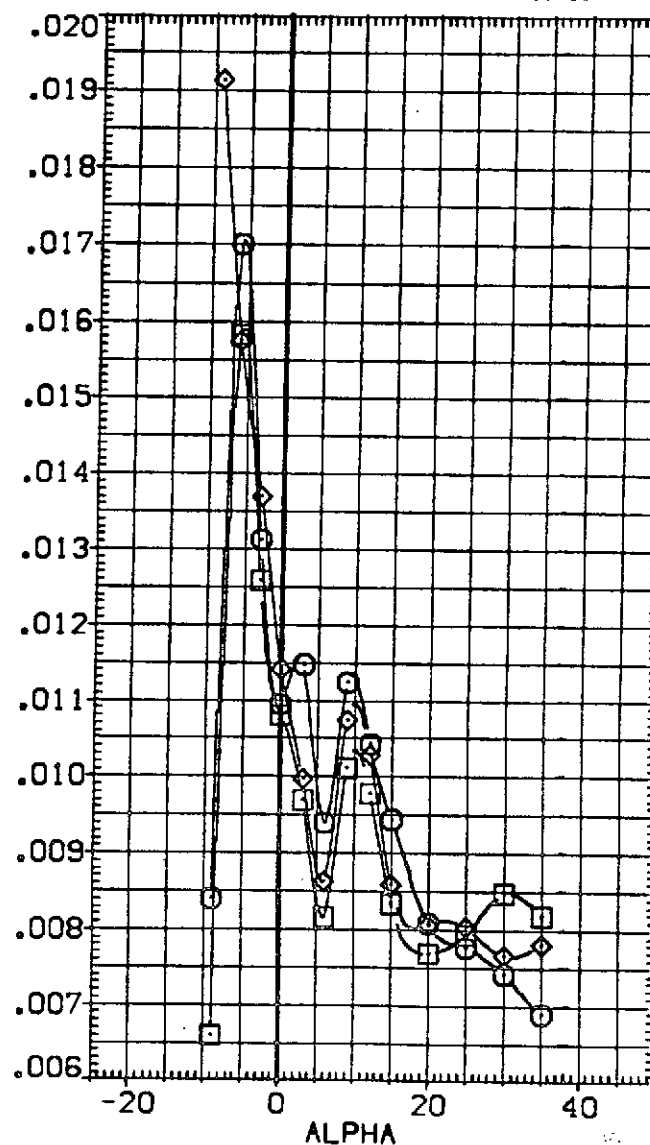
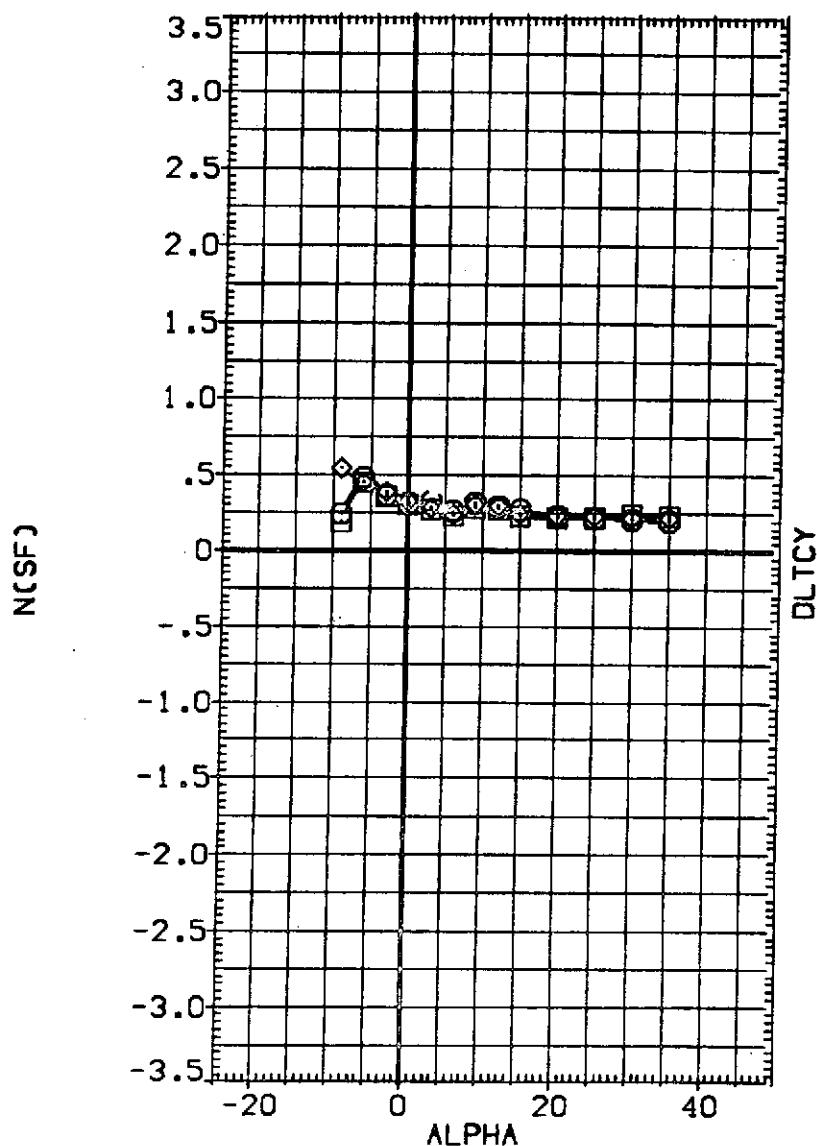


FIG. 21 EFFECT OF T/QA SIMULATION USING AIR WITH N85 JETS ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | FORCS | TORCS | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|---------|-----------------------|------------------|
| (RHL028) | 0A82 CFHT113 MODEL 32-0 GR3 V/N49 RCS OFF | 200.000 | .000 | 72.000 | .000 | CREF | 2380.0000 SQ.FT. |
| (RHL030) | 0A82 CFHT113 MODEL 32-0 GR3 V/N49 (AIR) | 200.000 | 63.000 | 72.000 | 19.000 | LREF | 474.8100 IN. |
| (RHL031) | 0A82 CFHT113 MODEL 32-0 GR3 V/N49 (AIR) | 200.000 | 261.000 | 75.000 | 60.000 | BREF | 938.6800 IN. |
| (RHL032) | 0A82 CFHT113 MODEL 32-0 GR3 V/N49 (AIR) | 200.000 | 478.000 | 75.000 | 110.000 | XMRP | 1076.7000 IN. |
| (RHL033) | 0A82 CFHT113 MODEL 32-0 GR3 V/N49 (AIR) | 200.000 | 695.000 | 60.000 | 160.000 | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

PITCHING MOMENT COEFFICIENT, CLM

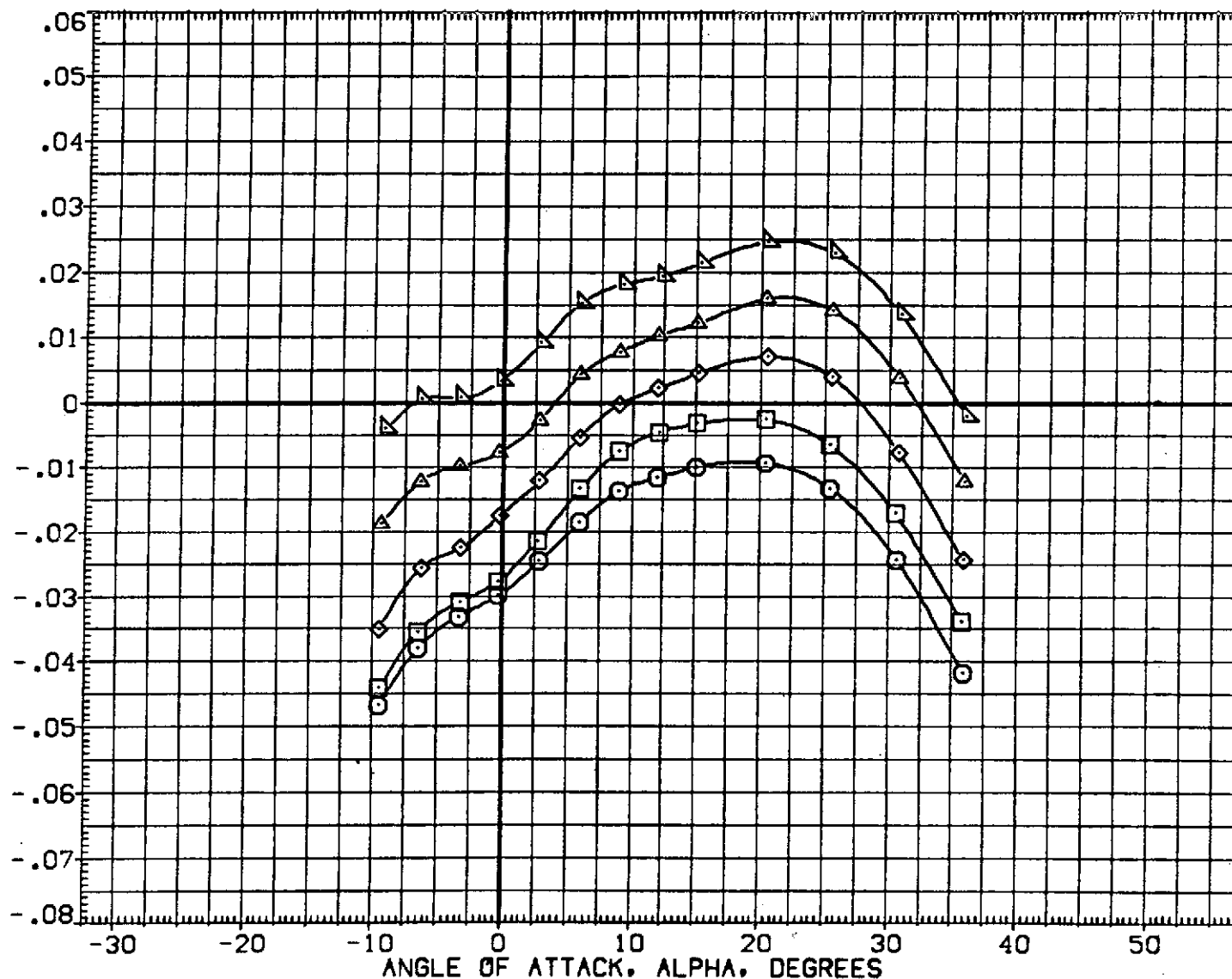


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 200 ON AERO CHARACT
(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHLF08) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 RCS OFF | 200.000 | .000 | 72.000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL030) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 [AIR] | 200.000 | 83.000 | 72.000 | 19.000 | LREF 474.8100 IN. |
| (RHL031) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 [AIR] | 200.000 | 261.000 | 75.000 | 60.000 | BREF 936.6800 IN. |
| (RHL032) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 [AIR] | 200.000 | 478.000 | 78.000 | 110.000 | XMRP 1076.7000 IN. |
| (RHL033) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 [AIR] | 200.000 | 695.000 | 80.000 | 160.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

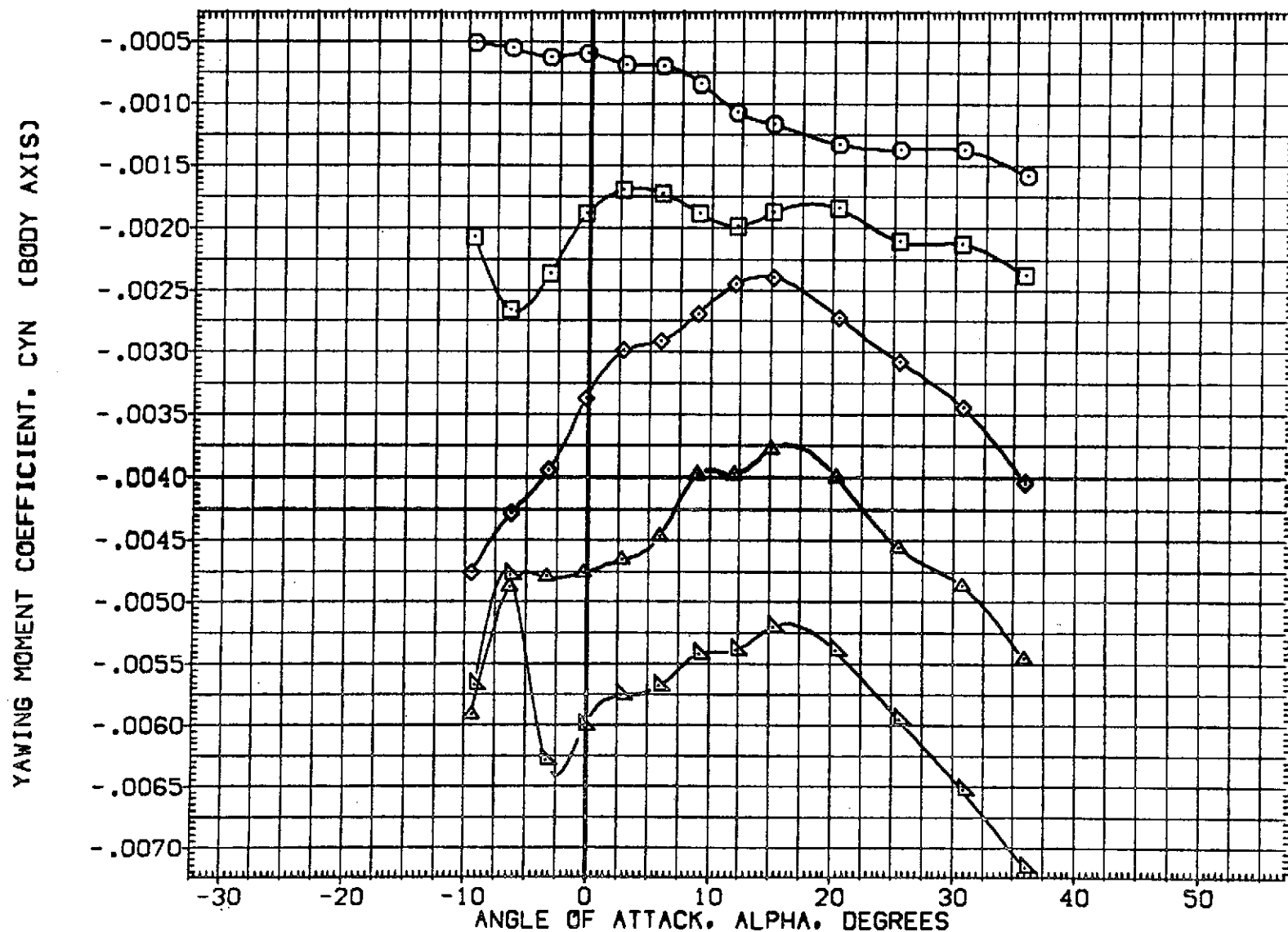


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, $Q(\text{PSF}) = 200$ ON AERO CHARACT

(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | FORCS | TERCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|------------------------|
| (RHL008) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 200.000 | .000 | .000 | .000 | GREF 2300.0000 89. FT. |
| (RHL030) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 200.000 | 83.000 | 72.000 | 19.000 | LREF 474.9100 IN. |
| (RHL031) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 200.000 | 261.000 | 75.000 | 69.000 | GREF 923.6500 IN. |
| (RHL032) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 200.000 | 478.000 | 78.000 | 110.000 | XMRP 1076.7000 IN. |
| (RHL033) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 200.000 | 695.000 | 80.000 | 160.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

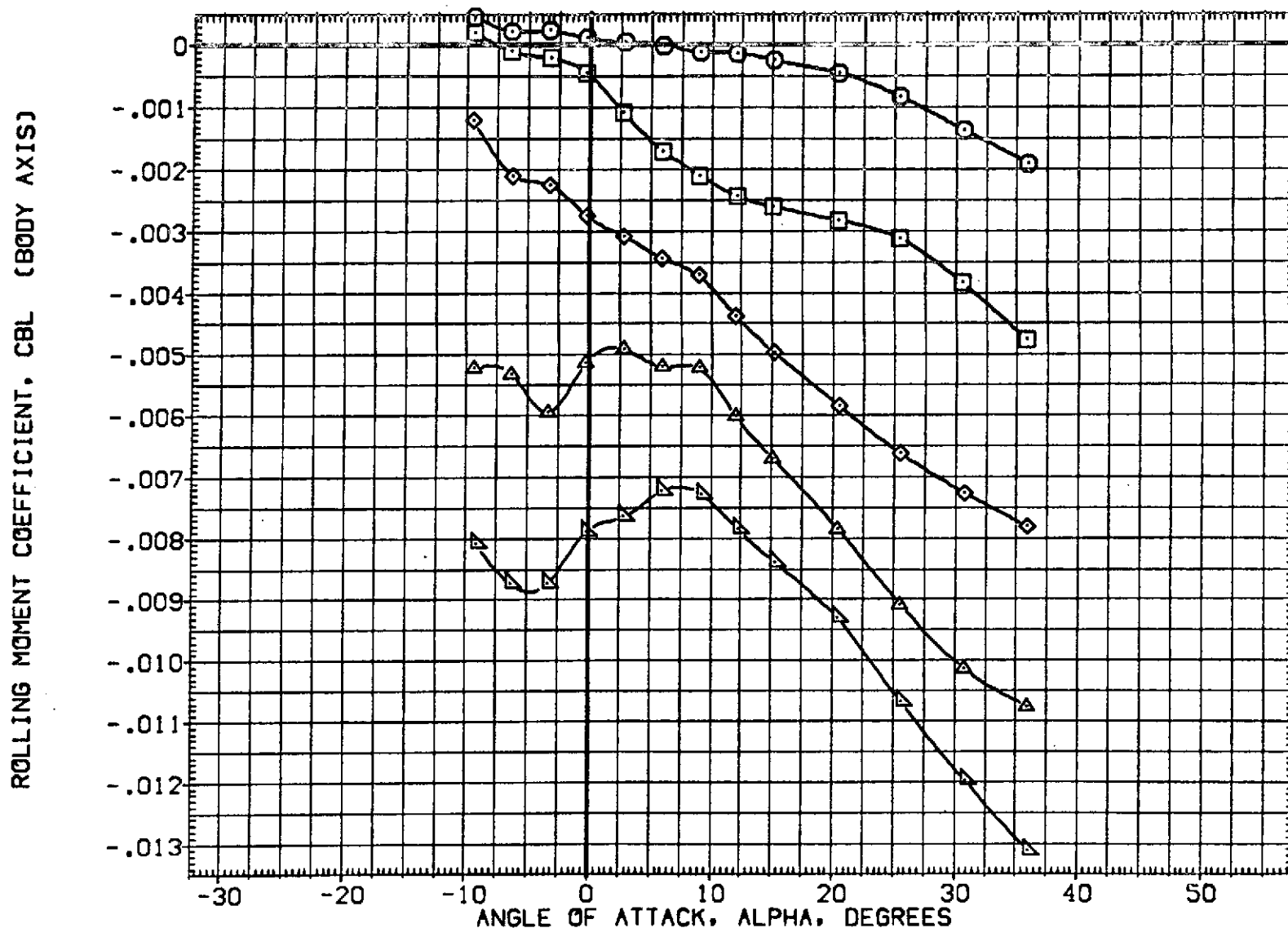


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|---------|--------|---------|-----------------------|------------------|
| (RHL08) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | RCS OFF | 200.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL030) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 200.000 | 83.000 | 72.000 | 19.000 | LREF | 474.8100 IN. |
| (RHL031) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 200.000 | 261.000 | 75.000 | 60.000 | BREF | 936.6900 IN. |
| (RHL032) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 200.000 | 478.000 | 78.000 | 110.000 | XMRP | 1076.7000 IN. |
| (RHL033) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 200.000 | 695.000 | 80.000 | 160.000 | YMRP | .0000 IN. |
| | | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

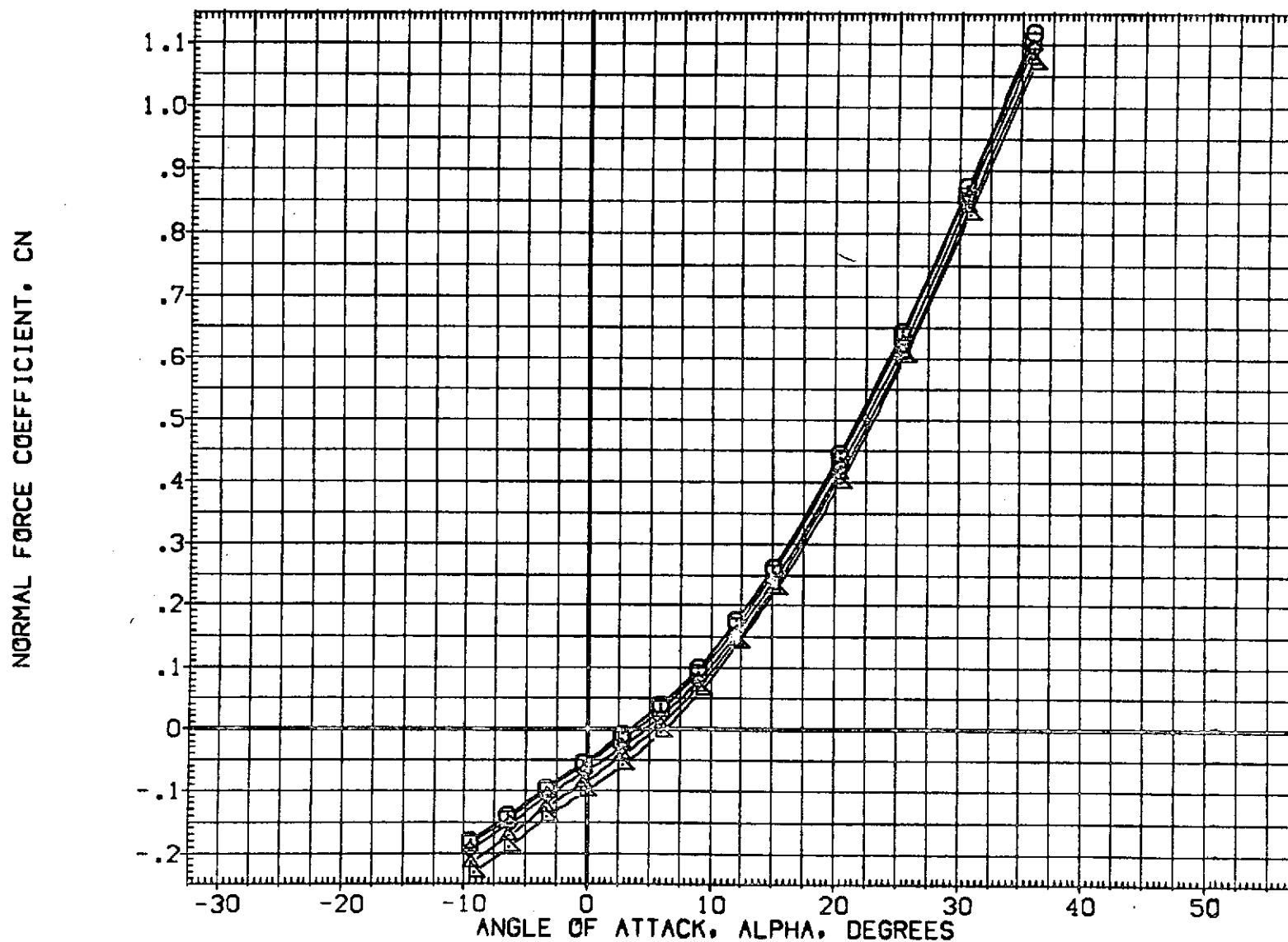


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 200 ON AERO CHARACT
(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHL008) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 200.000 | .000 | .000 | .000 | SREF 2380.0000 SQ.FT. |
| (RHL030) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 [AIR] | 200.000 | 63.000 | 72.000 | 19.000 | LREF 474.9100 IN. |
| (RHL031) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 [AIR] | 200.000 | 261.000 | 75.000 | 60.000 | BREF 925.6500 IN. |
| (RHL032) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 [AIR] | 200.000 | 478.000 | 78.000 | 110.000 | XMRP 1076.7000 IN. |
| (RHL033) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 [AIR] | 200.000 | 695.000 | 80.000 | 160.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

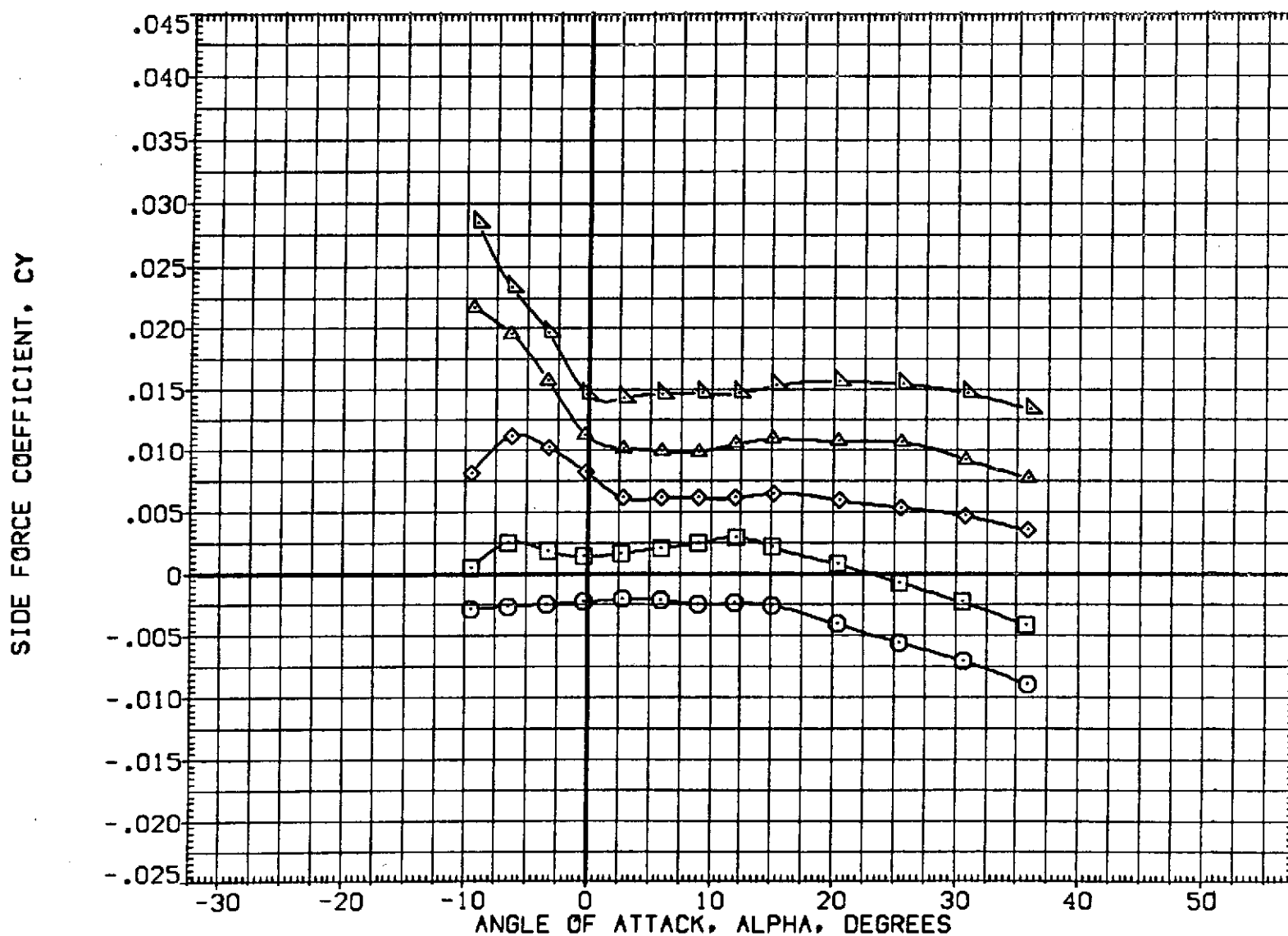


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | RCS OFF | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|---------|--------|---------|-----------------------|-----------|--------|
| (RHL08) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | | 200.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHL030) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 200.000 | 83.000 | 72.000 | 19.000 | LREF | 474.8100 | IN. |
| (RHL031) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 200.000 | 261.000 | 75.000 | 60.000 | BREF | 936.6800 | IN. |
| (RHL032) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 200.000 | 478.000 | 78.000 | 110.000 | XMRP | 1076.7000 | IN. |
| (RHL033) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 200.000 | 695.000 | 80.000 | 160.000 | YMRP | .0000 | IN. |
| | | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | | SCALE | .0100 | |

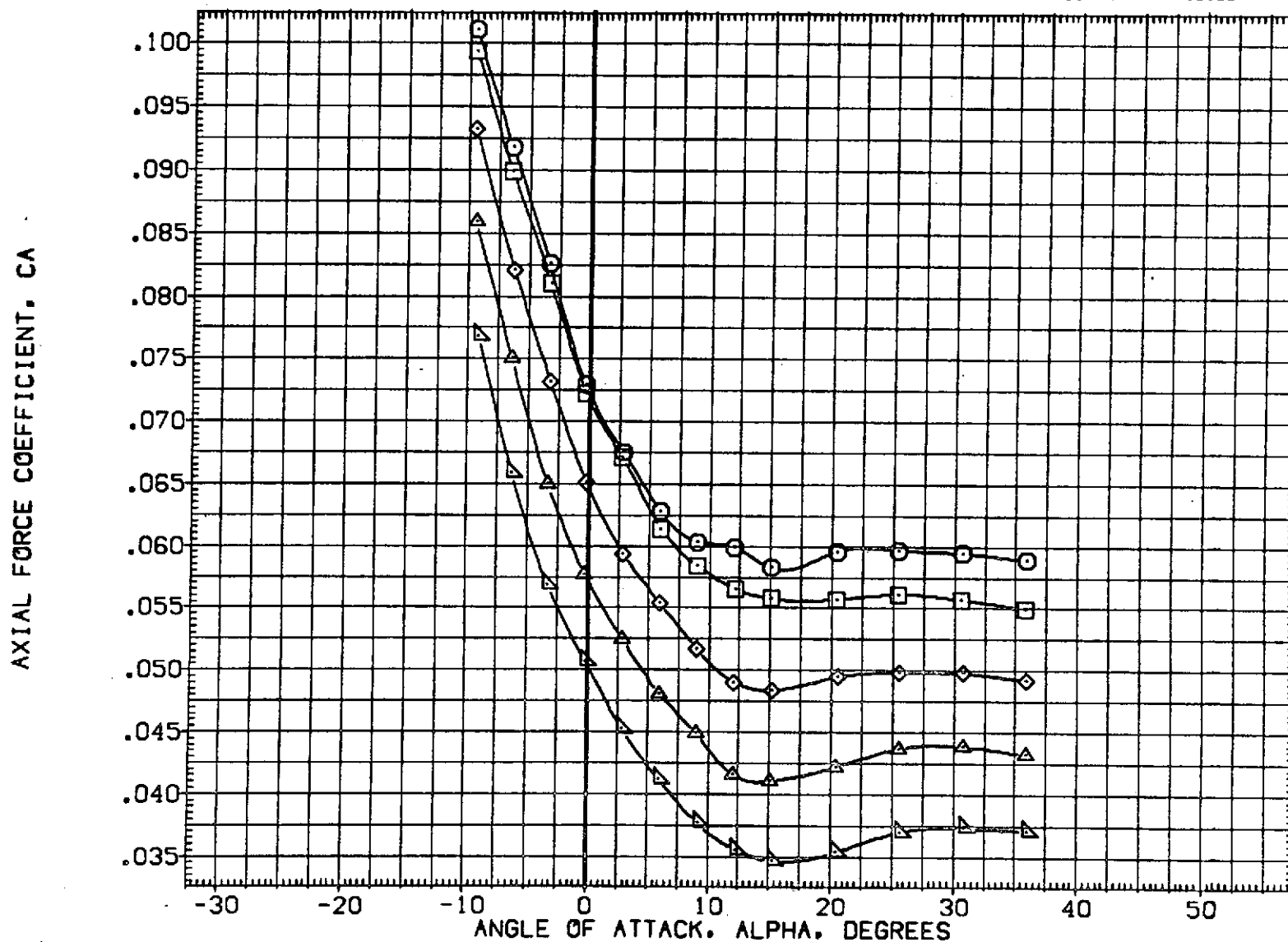


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC30] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC31] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC32] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC33] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 200.000 | 83.000 | 72.000 | 19.000 | SREF | 2690.0000 | 90.FT. |
| 200.000 | 261.000 | 75.000 | 60.000 | LREF | 474.8100 | IN. |
| 200.000 | 478.000 | 78.000 | 110.000 | SREF | 936.6300 | IN. |
| 200.000 | 695.000 | 80.000 | 160.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

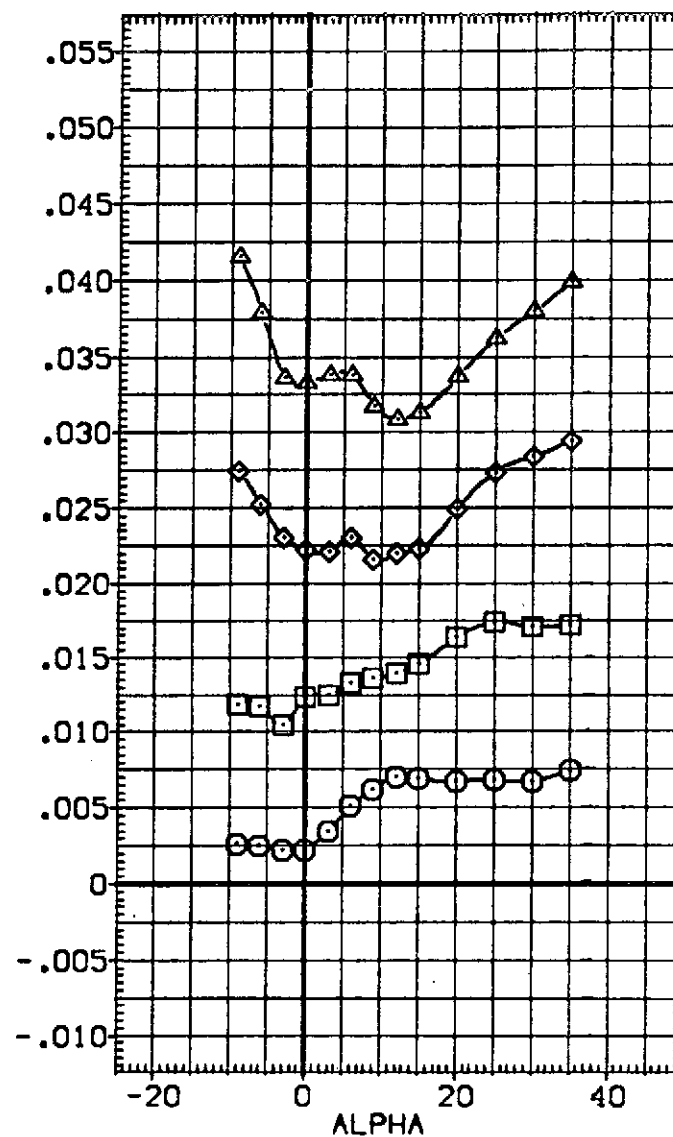
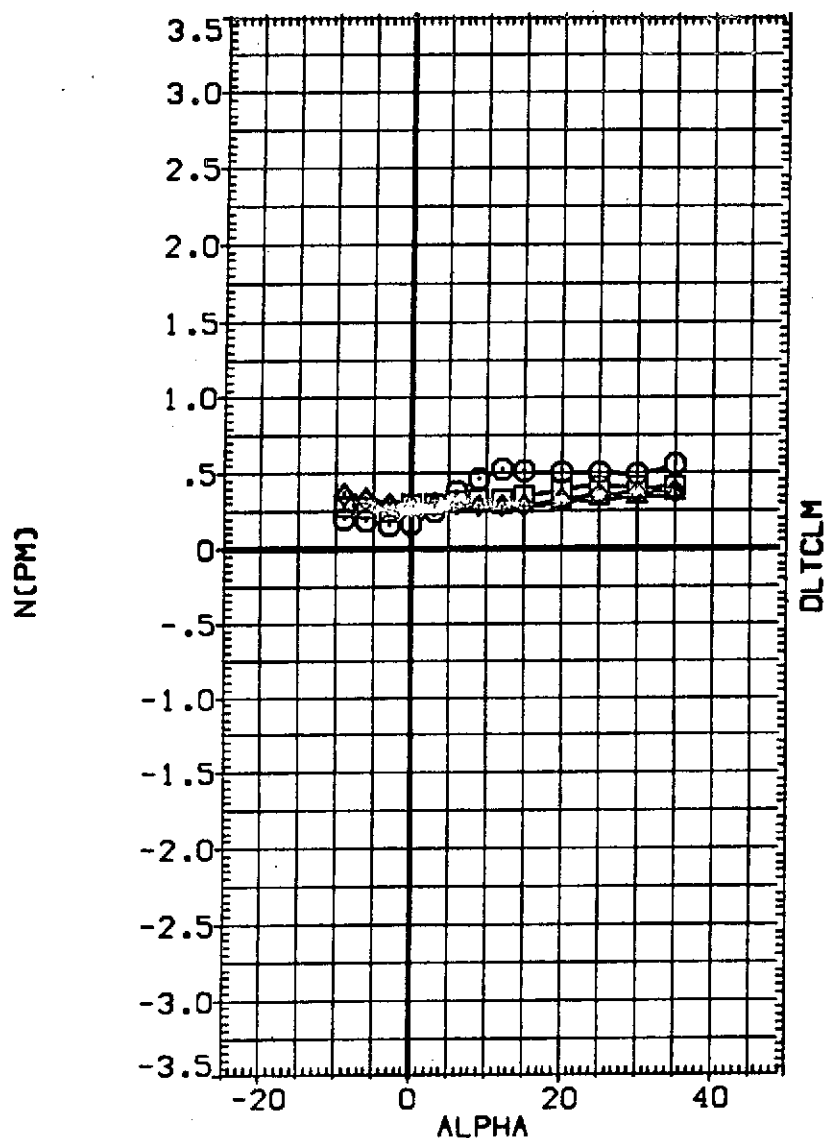


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, $Q(PSF) = 200$ ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC30] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (AIR) |
| [CHLC31] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (AIR) |
| [CHLC32] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (AIR) |
| [CHLC33] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 200.000 | 83.000 | 72.000 | 19.000 | SREF | 2690.0000 SQ.FT. |
| 200.000 | 261.000 | 75.000 | 60.000 | LREF | 474.8100 IN. |
| 200.000 | 478.000 | 78.000 | 110.000 | BREF | 936.6800 IN. |
| 200.000 | 695.000 | 80.000 | 160.000 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

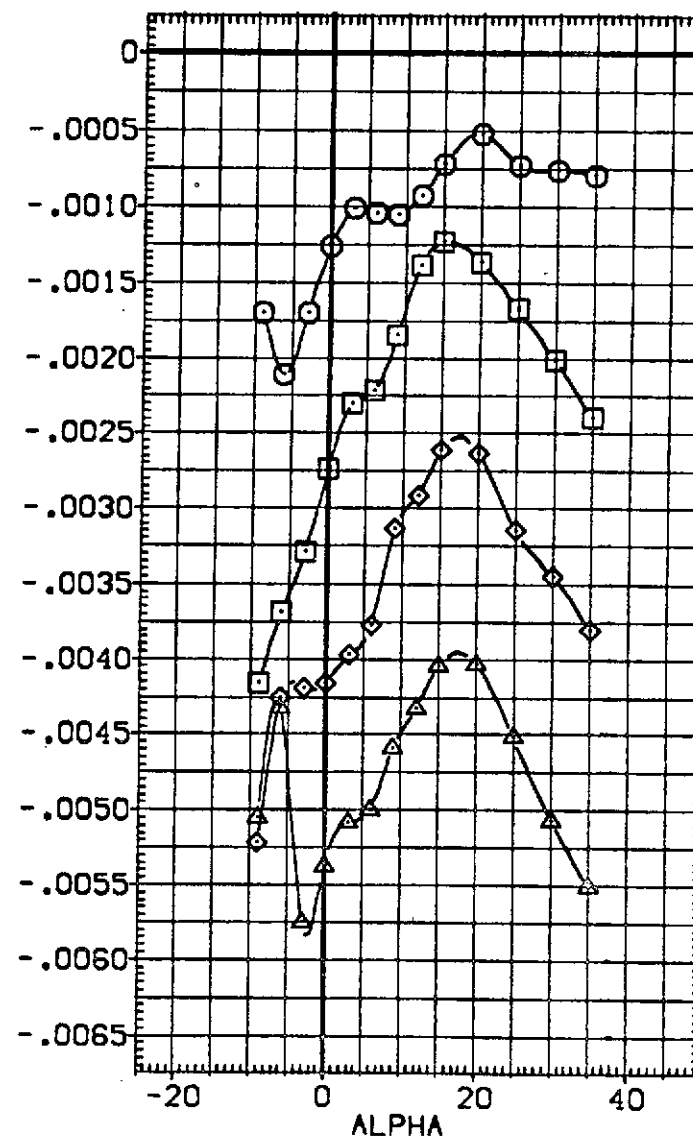
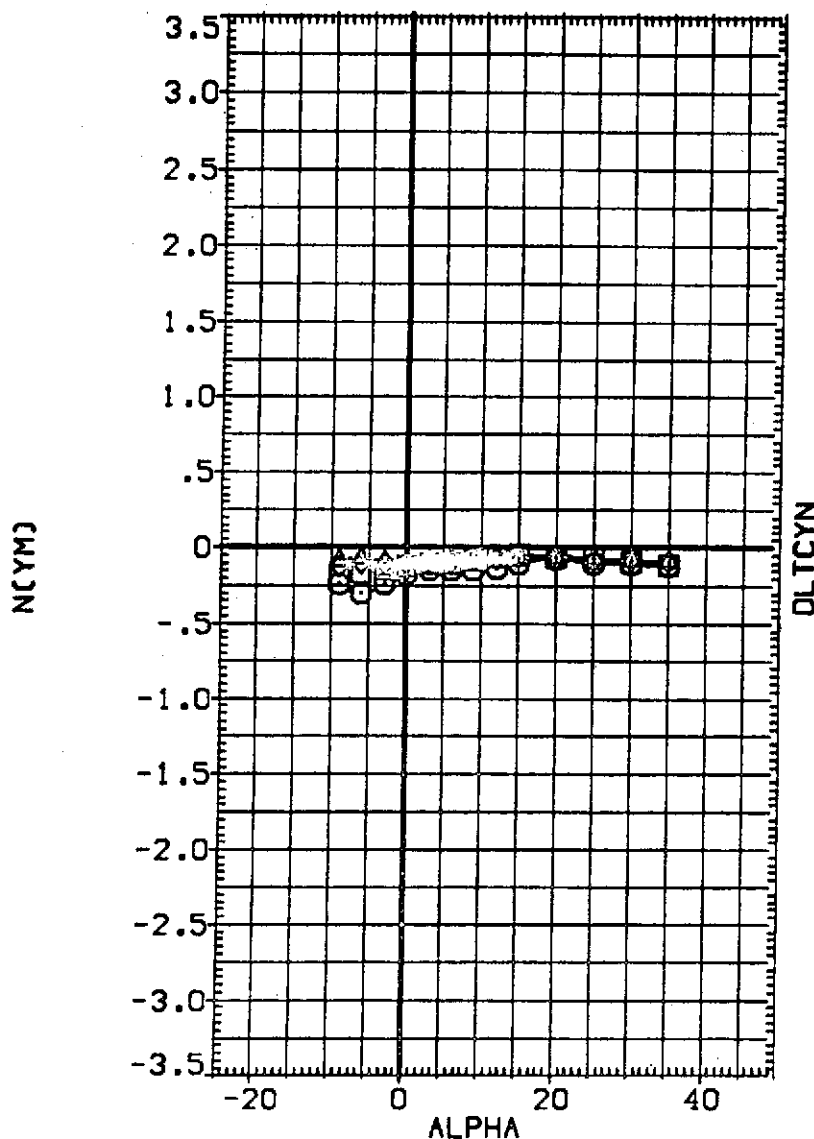


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 200 ON AERO CHARACT
(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

| | | | |
|----------|---|-----------------------------------|-------|
| [CHLC30] | ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC31] | □ | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC32] | ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC33] | △ | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 200.000 | 83.000 | 72.000 | 19.000 | SREF | 2680.0000 | 80.FT. |
| 200.000 | 261.000 | 75.000 | 60.000 | LREF | 474.8100 | IN. |
| 200.000 | 478.000 | 78.000 | 110.000 | BREF | 935.6900 | IN. |
| 200.000 | 695.000 | 80.000 | 160.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

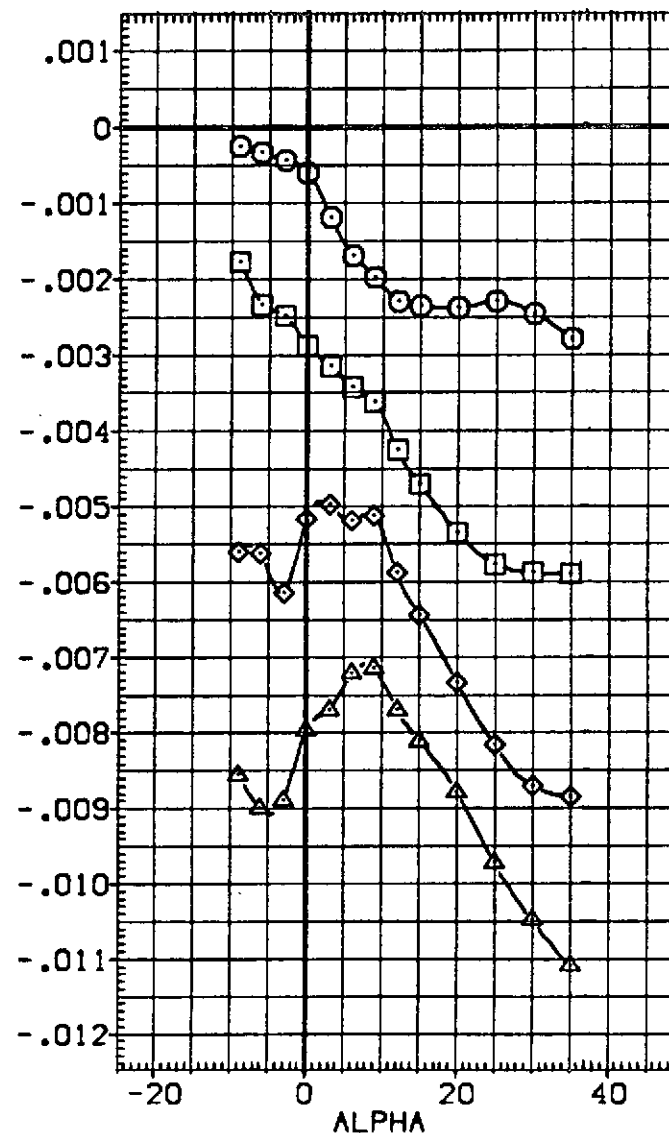
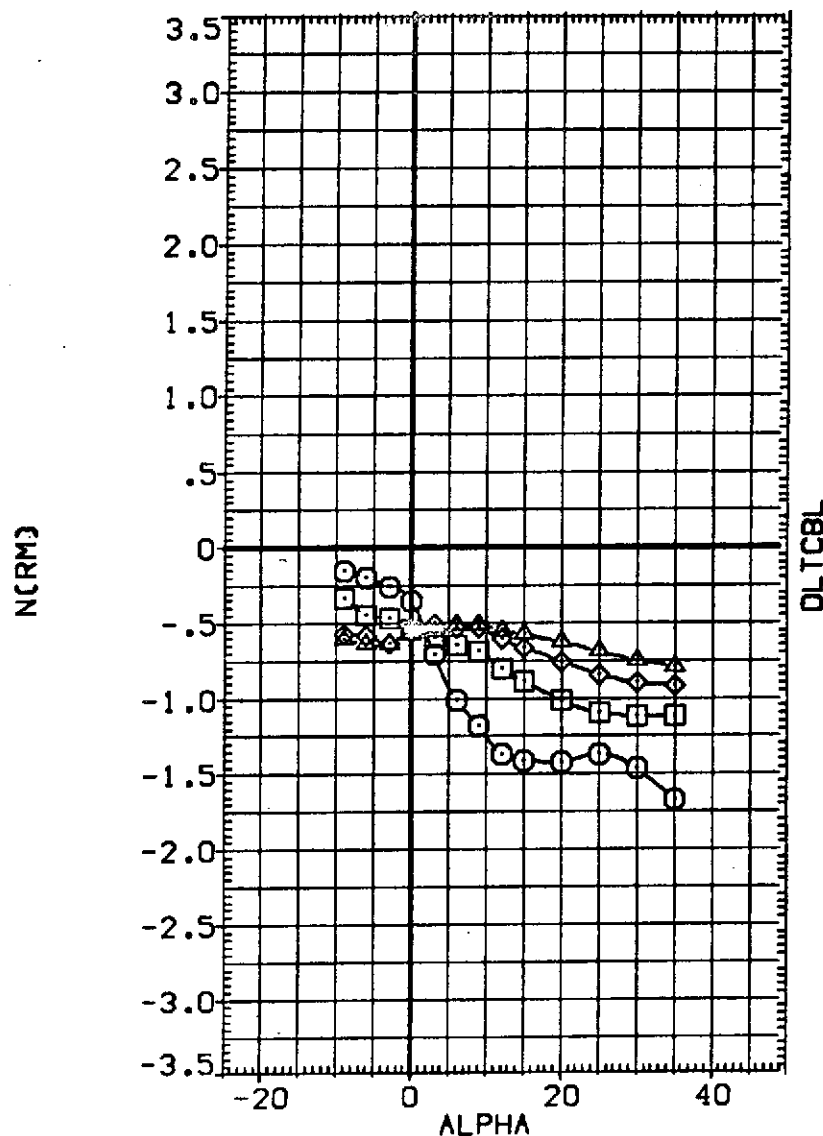


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC30] | QAB2 CFHT113 MODEL 32-0 GRB V/N49 | [AIR] |
| [CHLC31] | QAB2 CFHT113 MODEL 32-0 GRB V/N49 | [AIR] |
| [CHLC32] | QAB2 CFHT113 MODEL 32-0 GRB V/N49 | [AIR] |
| [CHLC33] | QAB2 CFHT113 MODEL 32-0 GRB V/N49 | [AIR] |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 200.000 | 83.000 | 72.000 | 19.000 | SREF | 2690.0000 | 50.FT. |
| 200.000 | 261.000 | 75.000 | 60.000 | LREF | 474.8100 | IN. |
| 200.000 | 478.000 | 78.000 | 110.000 | BREF | 936.6800 | IN. |
| 200.000 | 695.000 | 80.000 | 160.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

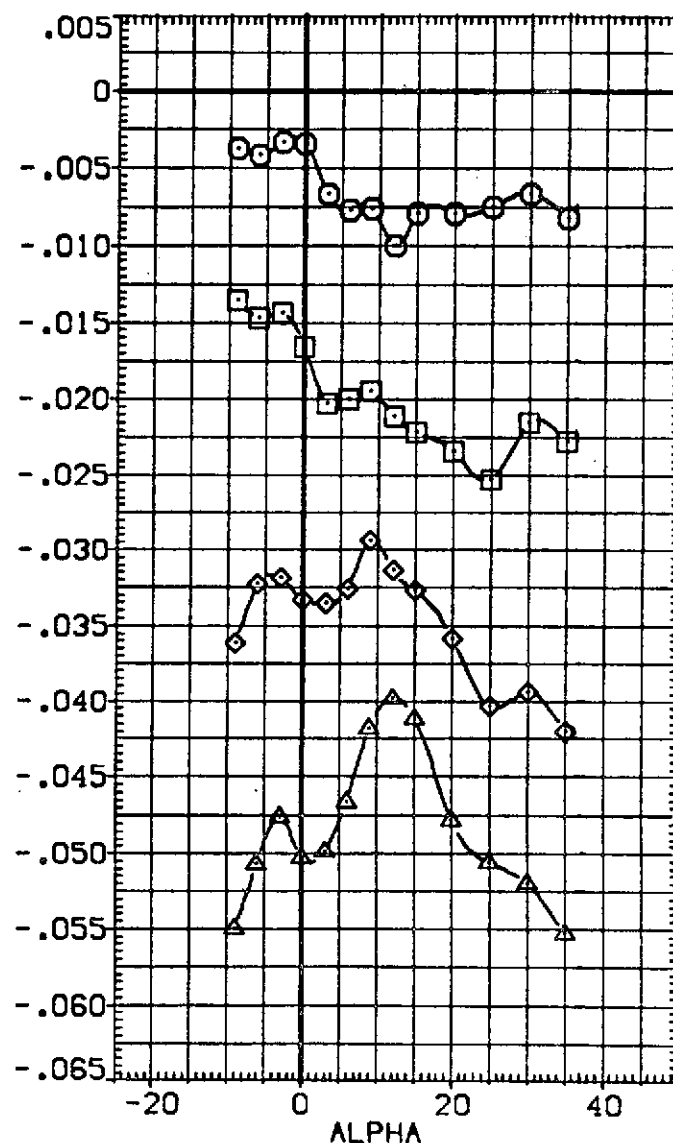
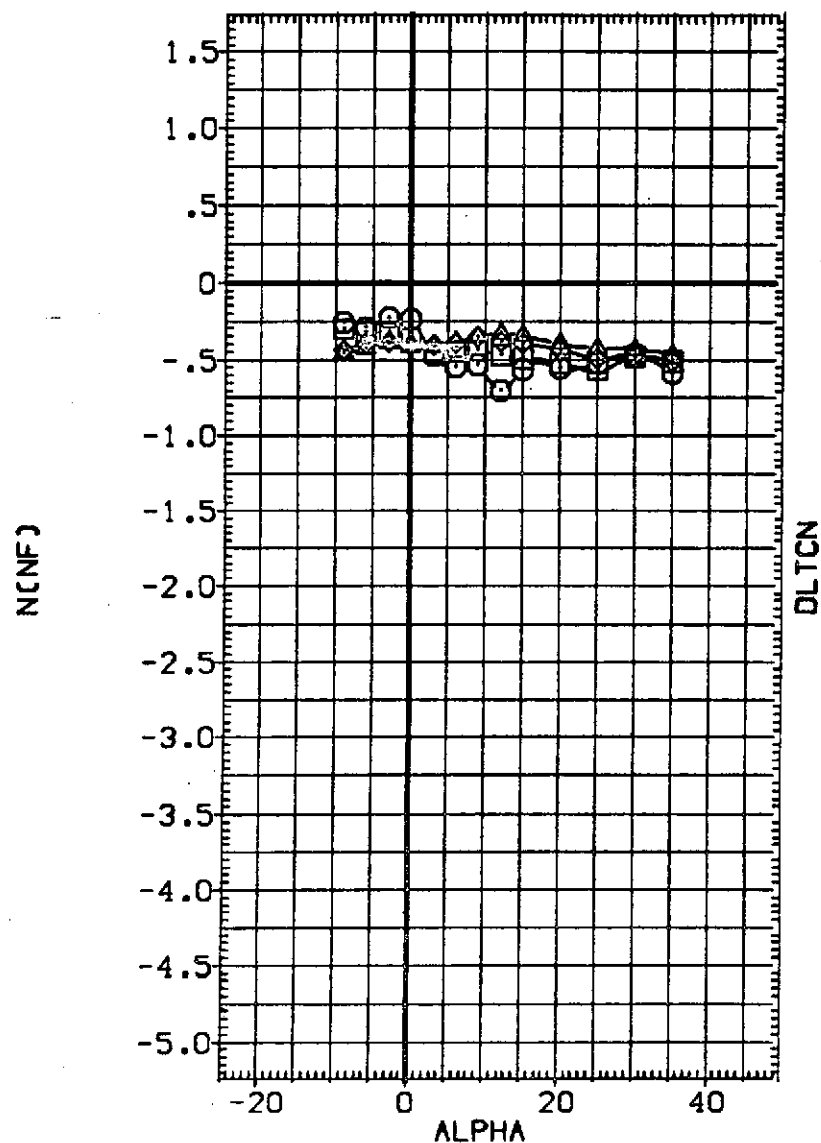


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, $Q(\text{PSF}) = 200$ ON AERO CHARACT
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC30) | OA82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) |
| (CHLC31) | OA82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) |
| (CHLC32) | OA82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) |
| (CHLC33) | OA82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 200.000 | 83.000 | 72.000 | 19.000 | SREF | 2690.0000 SQ.FT. |
| 200.000 | 261.000 | 75.000 | 60.000 | LREF | 474.8100 IN. |
| 200.000 | 478.000 | 78.000 | 110.000 | BREF | 936.8800 IN. |
| 200.000 | 695.000 | 80.000 | 160.000 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

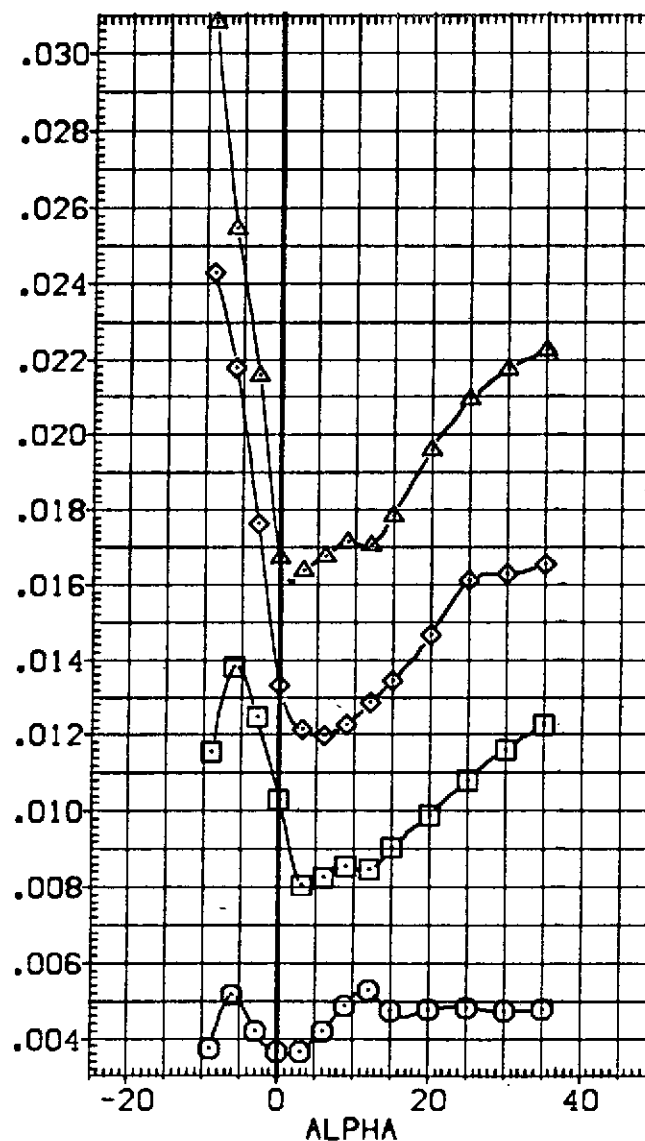
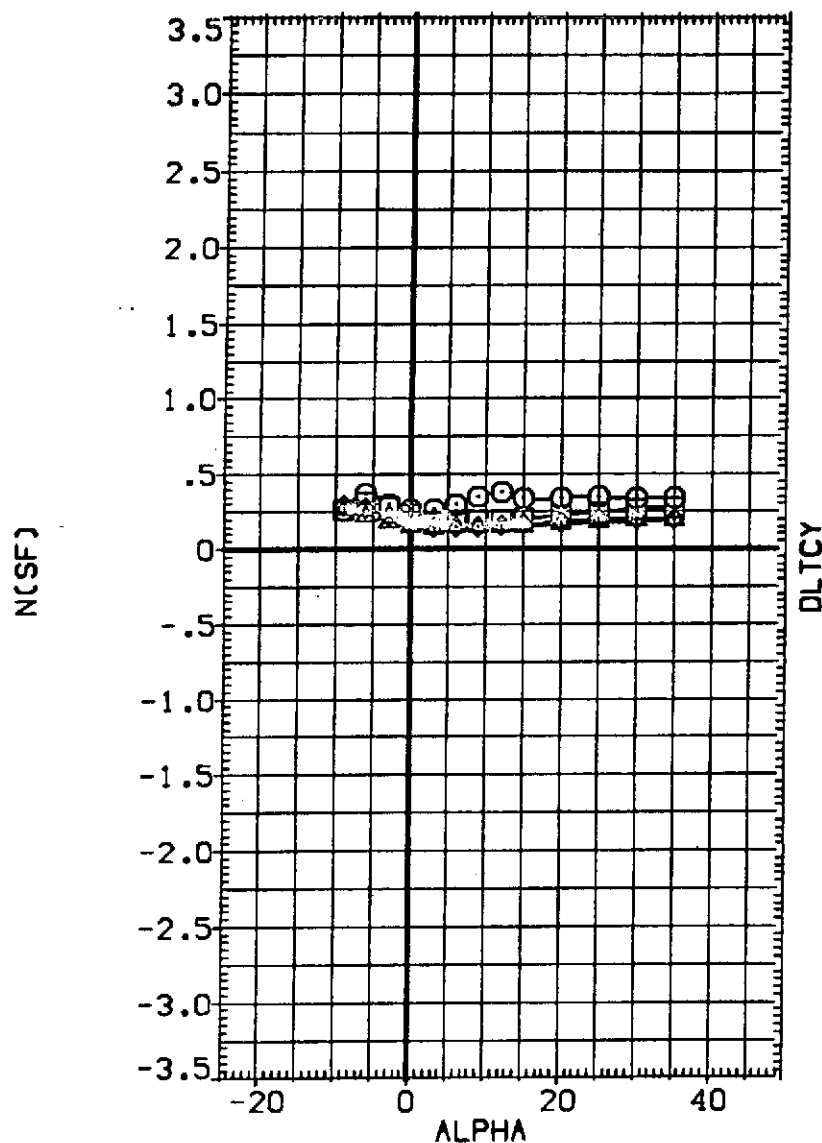


FIG. 22 EFFECT OF T/QA USING AIR WITH N49 JETS, $Q(PSF) = 200$ ON AERO CHARACT
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|---------|--------|---------|-----------------------|-----------|--------|
| (RHL05) | QA82 CFHT113 MODEL 32-0 ORB V/N49 | RCS OFF | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHL044) | QA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 125.000 | 78.000 | 83.000 | 28.500 | LREF | 474.8100 | IN. |
| (RHL045) | QA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 125.000 | 98.000 | 83.000 | 36.000 | BREF | 936.6800 | IN. |
| (RHL046) | QA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 125.000 | 261.000 | 83.000 | 96.000 | XMRP | 1076.7000 | IN. |
| (RHL047) | QA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | YMRP | .0000 | IN. |
| (RHL048) | QA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 125.000 | 702.000 | 89.000 | 258.000 | ZMRP | 375.0000 | IN. |
| | | | | | | | SCALE | .0100 | |

PITCHING MOMENT COEFFICIENT, CLM

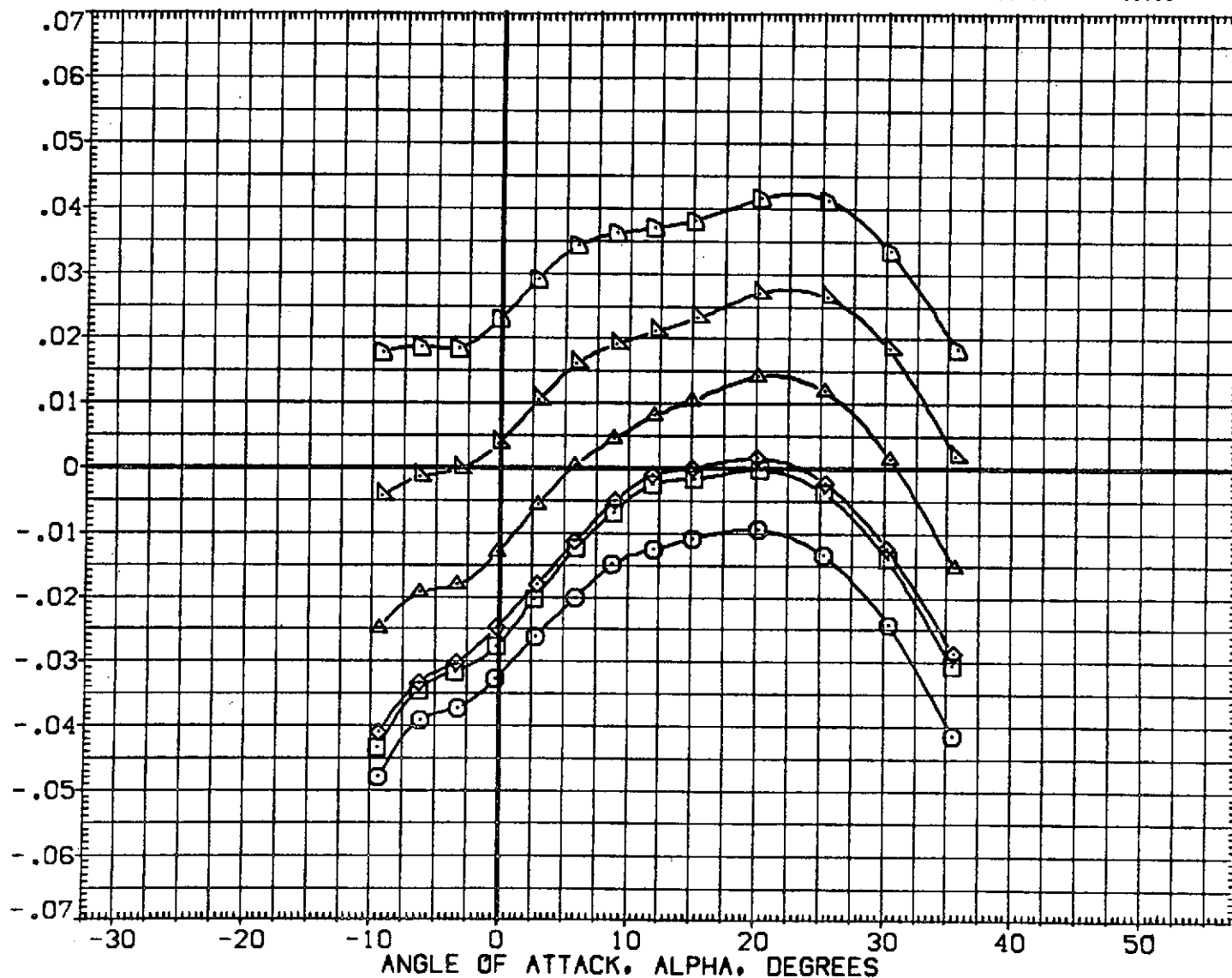


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TORCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHL045) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 RCS OFF | 125.000 | 78.000 | 83.000 | 28.500 | SREF 2320.0000 SQ.FT. |
| (RHL044) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 125.000 | 78.000 | 83.000 | 28.500 | LREF 474.8100 IN. |
| (RHL045) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 125.000 | 89.000 | 83.000 | 28.500 | SREF 939.5800 IN. |
| (RHL046) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 125.000 | 261.000 | 83.000 | 28.500 | XMRP 1076.7000 IN. |
| (RHL047) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | YMRP .0000 IN. |
| (RHL048) | 0A82 CFHT113 MODEL 32-0 GR8 V/N49 (AIR) | 125.000 | 702.000 | 83.000 | 259.000 | ZMRP 375.0000 IN. |
| | | | | | SCALE | .0100 |

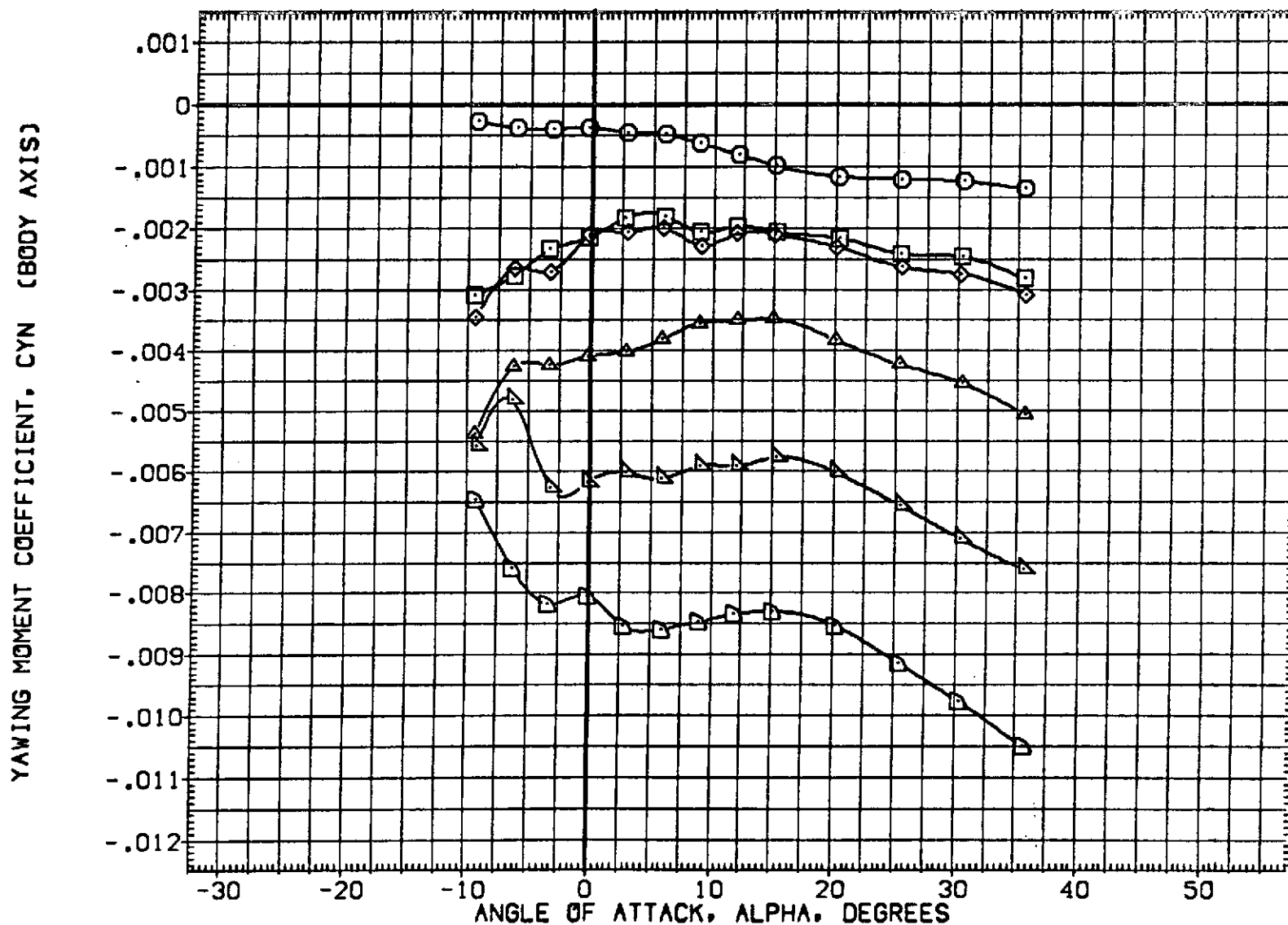


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHL005) | QA82 CFHT113 MODEL 32-G GR8 V/N49 RCS OFF | 125.000 | 78.000 | 83.000 | 28.500 | SREF 2690.0000 SQ.FT. |
| (RHL044) | QA82 CFHT113 MODEL 32-G GR8 V/N49 [AIR] | 125.000 | 78.000 | 83.000 | 28.500 | LREF 474.8100 IN. |
| (RHL045) | QA82 CFHT113 MODEL 32-G GR8 V/N49 [AIR] | 125.000 | 98.000 | 83.000 | 36.000 | BREF 936.6800 IN. |
| (RHL046) | QA82 CFHT113 MODEL 32-G GR8 V/N49 [AIR] | 125.000 | 261.000 | 83.000 | 96.000 | XMRP 1076.7000 IN. |
| (RHL047) | QA82 CFHT113 MODEL 32-G GR8 V/N49 [AIR] | 125.000 | 473.000 | 83.000 | 174.000 | YMRP .0000 IN. |
| (RHL048) | QA82 CFHT113 MODEL 32-G GR8 V/N49 [AIR] | 125.000 | 702.000 | 89.000 | 258.000 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

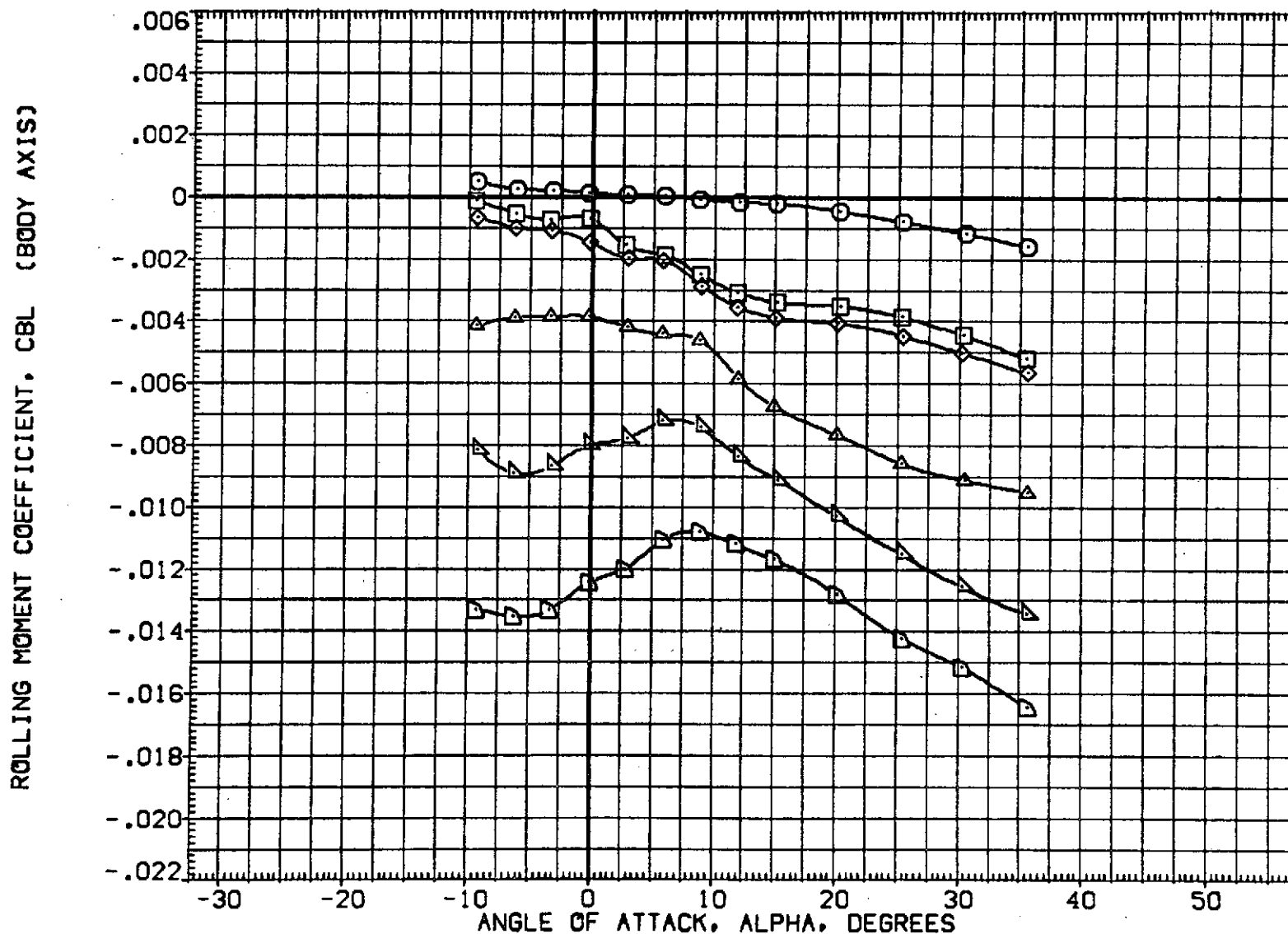


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|---------|-----------------------|-----------|--------|
| [RHL045] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 125.000 | 70.000 | 83.000 | 29.000 | SREF | 2890.0000 | SQ.FT. |
| [RHL044] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 70.000 | 83.000 | 29.500 | LREF | 474.8100 | IN. |
| [RHL045] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 98.000 | 83.000 | 36.000 | GRF | 936.8800 | IN. |
| [RHL046] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 261.000 | 83.000 | 99.000 | XMRP | 1076.7000 | IN. |
| [RHL047] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | YMRP | .0000 | IN. |
| [RHL048] | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 702.000 | 89.000 | 258.000 | ZMRP | 373.0000 | IN. |
| | | | | | | SCALE | .0100 | |

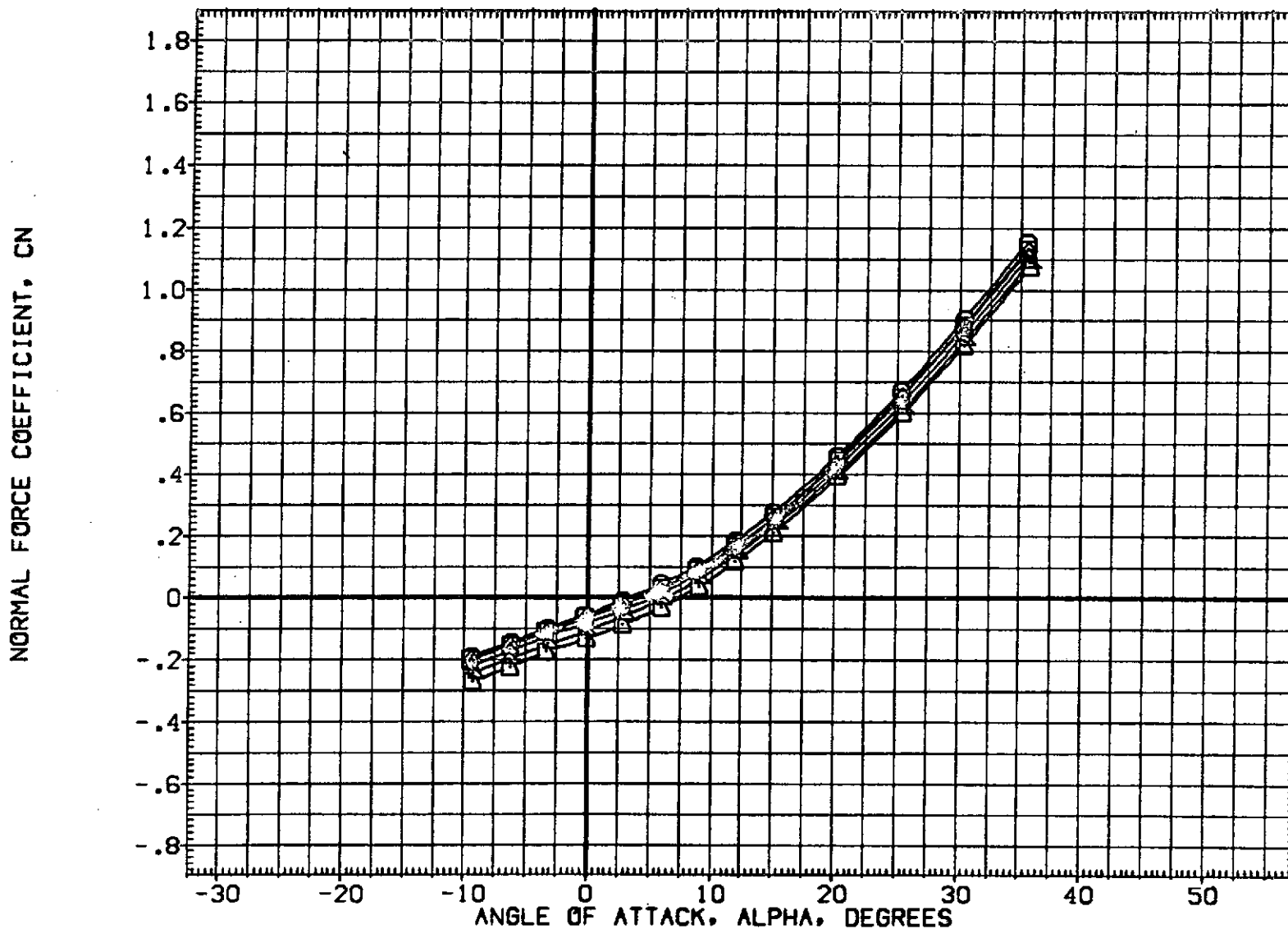


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET | SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|----------|--------|-----------------------------------|---------|---------|---------|--------|---------|-----------------------|
| [RHLF05] | ○ | GAB2 CFHT113 MODEL 32-0 ORB V/N49 | RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [RHL044] | ◇ | GAB2 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 125.000 | 78.000 | 83.000 | 28.500 | LREF 474.8100 IN. |
| [RHL045] | ◇ | GAB2 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 125.000 | 98.000 | 83.000 | 36.000 | BREF 936.6800 IN. |
| [RHL046] | △ | GAB2 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 125.000 | 261.000 | 83.000 | 96.000 | XMRP 1076.7000 IN. |
| [RHL047] | △ | GAB2 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 125.000 | 473.000 | 83.000 | 174.000 | YMRP .0000 IN. |
| [RHL048] | △ | GAB2 CFHT113 MODEL 32-0 ORB V/N49 | [AIR] | 125.000 | 702.000 | 89.000 | 258.000 | ZMRP 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

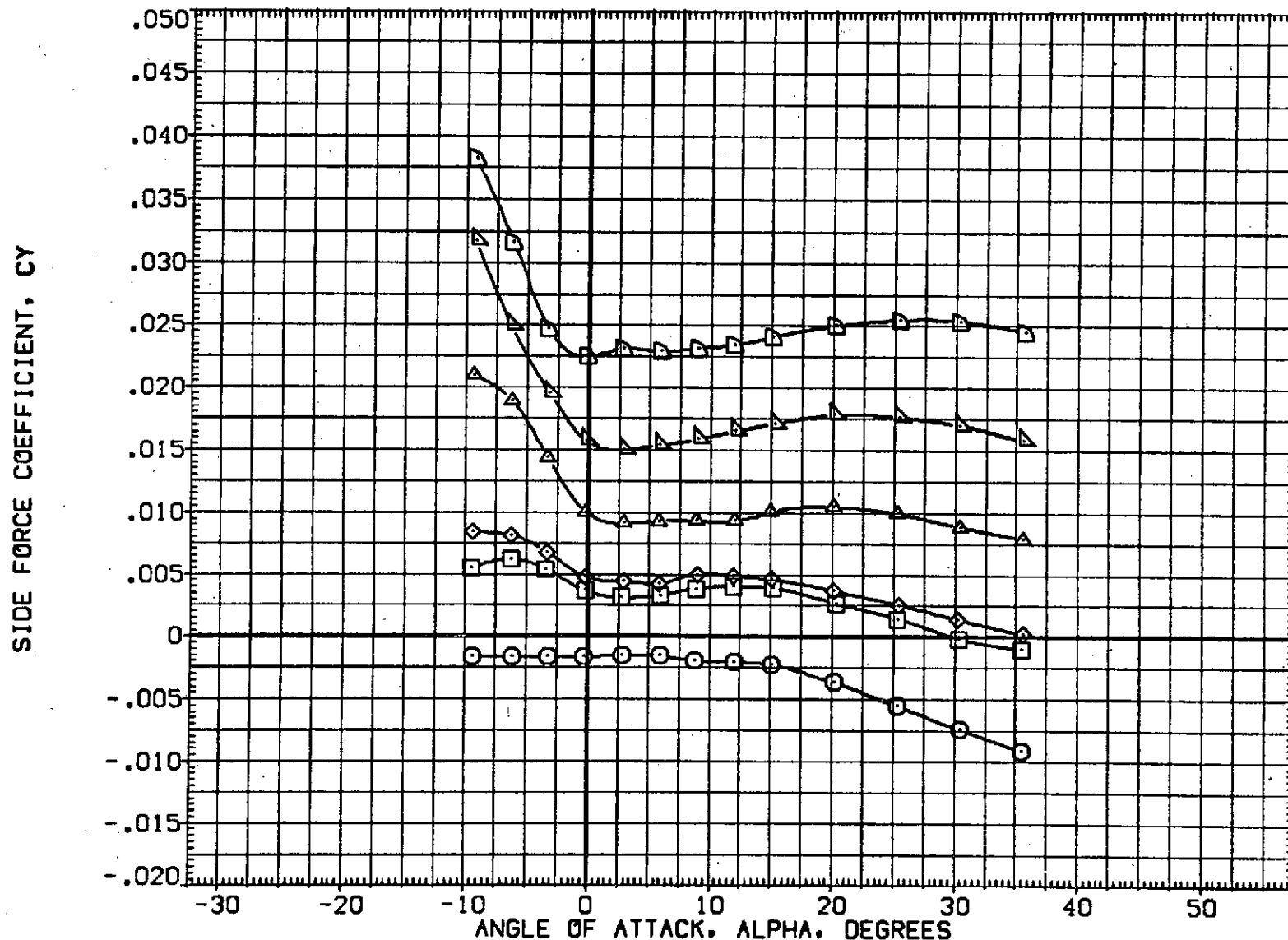


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, $Q(\text{PSF}) = 125$ ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|---------|-----------------------|-----------|---------|
| (RHLF05) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL044) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 125.000 | 78.000 | 83.000 | 28.500 | LREF | 474.8100 | IN. |
| (RHL045) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 125.000 | 98.000 | 83.000 | 36.000 | BREF | 936.6800 | IN. |
| (RHL046) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 125.000 | 261.000 | 83.000 | 96.000 | XMRP | 1076.7000 | IN. |
| (RHL047) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | YMRP | .0000 | IN. |
| (RHL048) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 125.000 | 702.000 | 89.000 | 258.000 | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

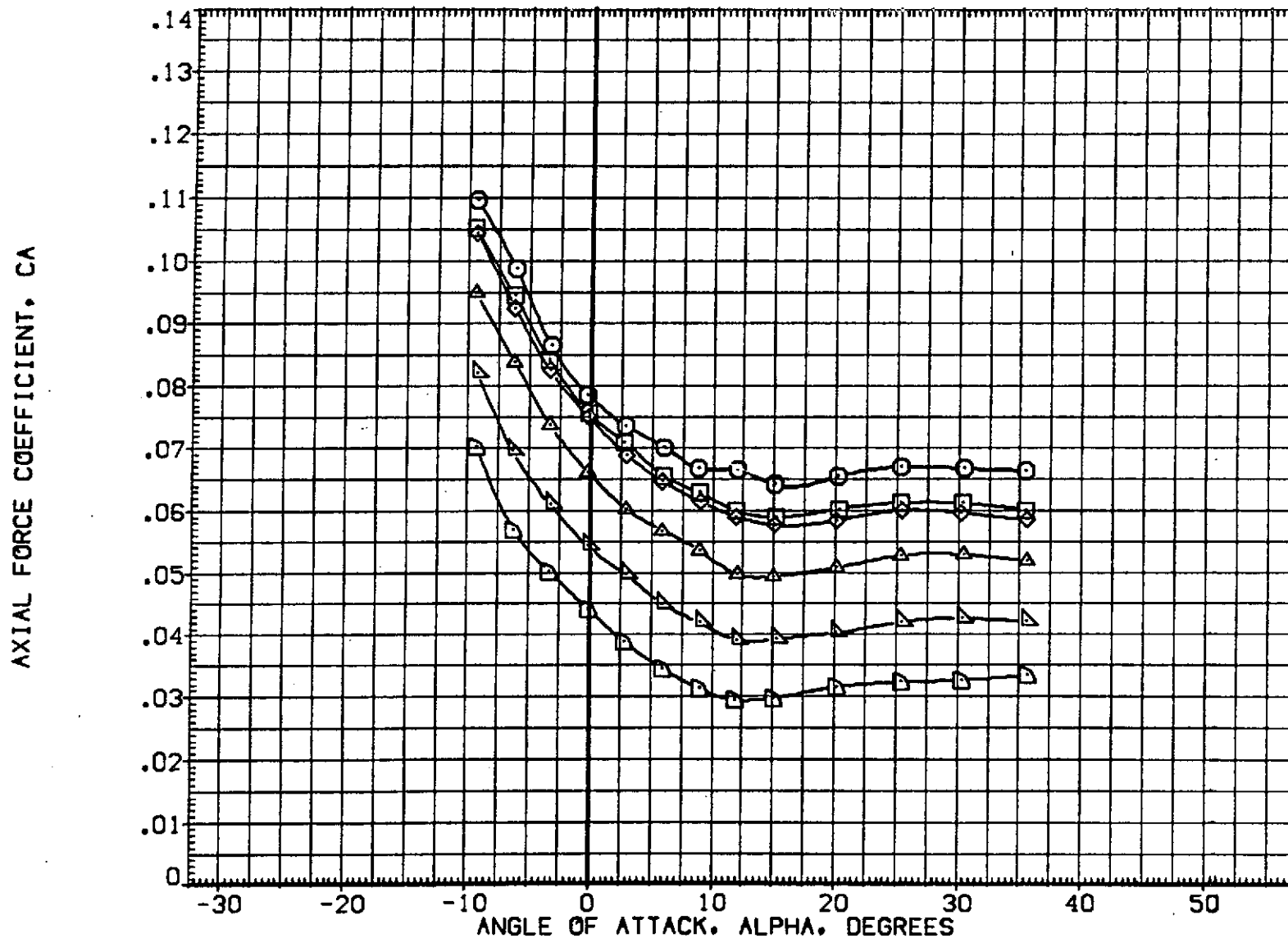


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, $Q(\text{PSF}) = 125$ ON AERO CHARACT

(A) MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC44) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC45) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC46) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC47) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC48) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|---------|
| 125.000 | 78.000 | 83.000 | 28.500 | SREF | 2690.0000 | 50. FT. |
| 125.000 | 98.000 | 83.000 | 36.000 | LREF | 474.8100 | IN. |
| 125.000 | 261.000 | 83.000 | 96.000 | BREF | 936.6800 | IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 | IN. |
| 125.000 | 702.000 | 89.000 | 258.000 | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

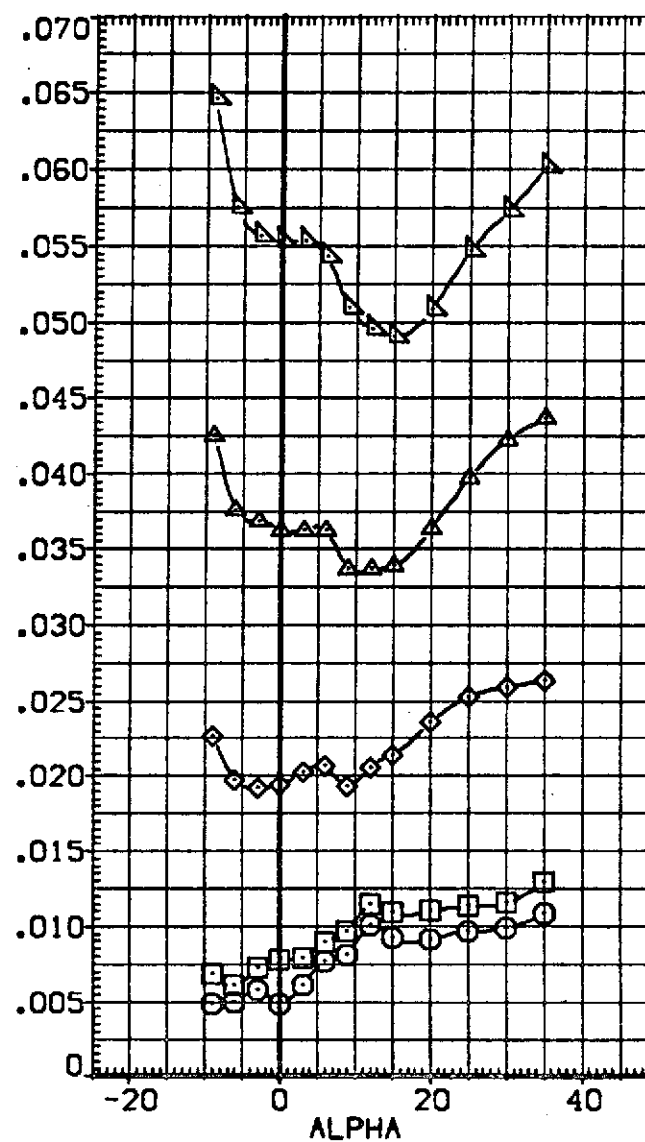
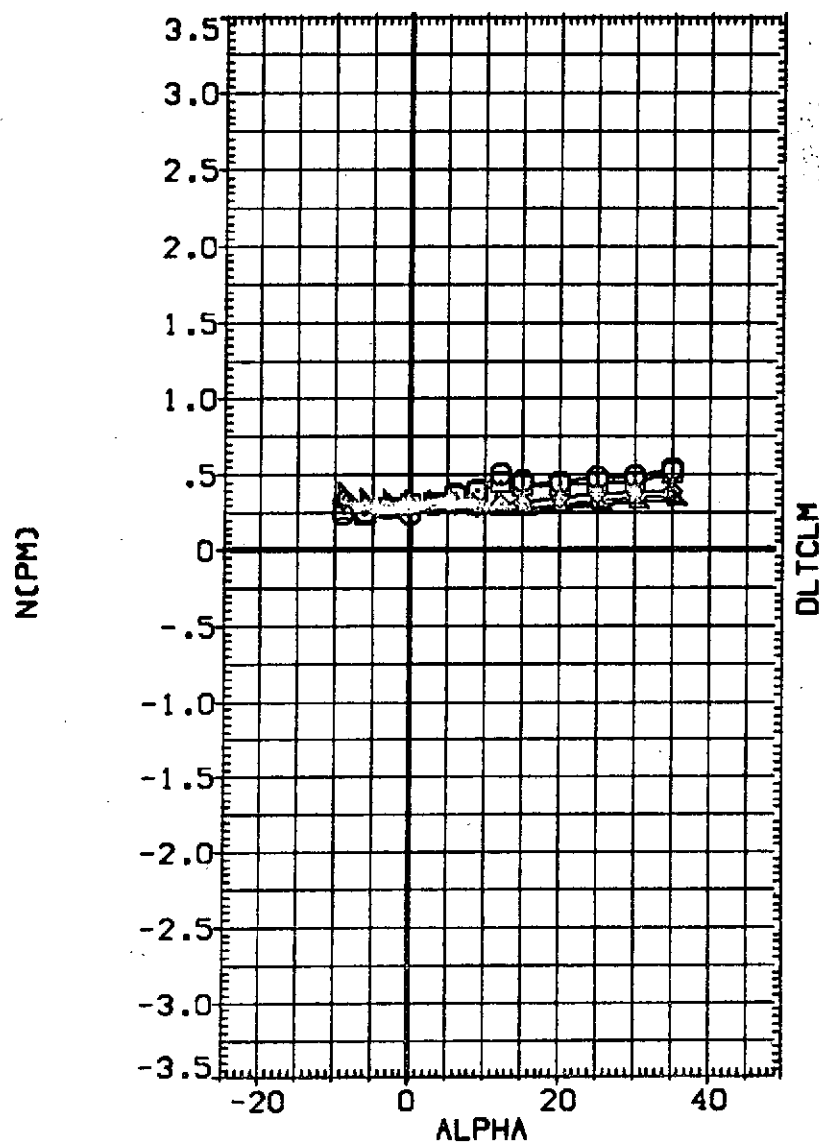


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|---------|-----------------------|-----------|--------|
| (CHLC44) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 78.000 | 83.000 | 28.500 | SREF | 2650.0000 | SQ.FT. |
| (CHLC45) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 98.000 | 83.000 | 36.000 | LREF | 474.8100 | IN. |
| (CHLC46) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 261.000 | 83.000 | 96.000 | BREF | 936.6800 | IN. |
| (CHLC47) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | XM RP | 1076.7000 | IN. |
| (CHLC48) | 0A82 CFHT113 MODEL 32-0 GRB V/N49 (AIR) | 125.000 | 702.000 | 89.000 | 258.000 | YM RP | .0000 | IN. |
| | | | | | | ZM RP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

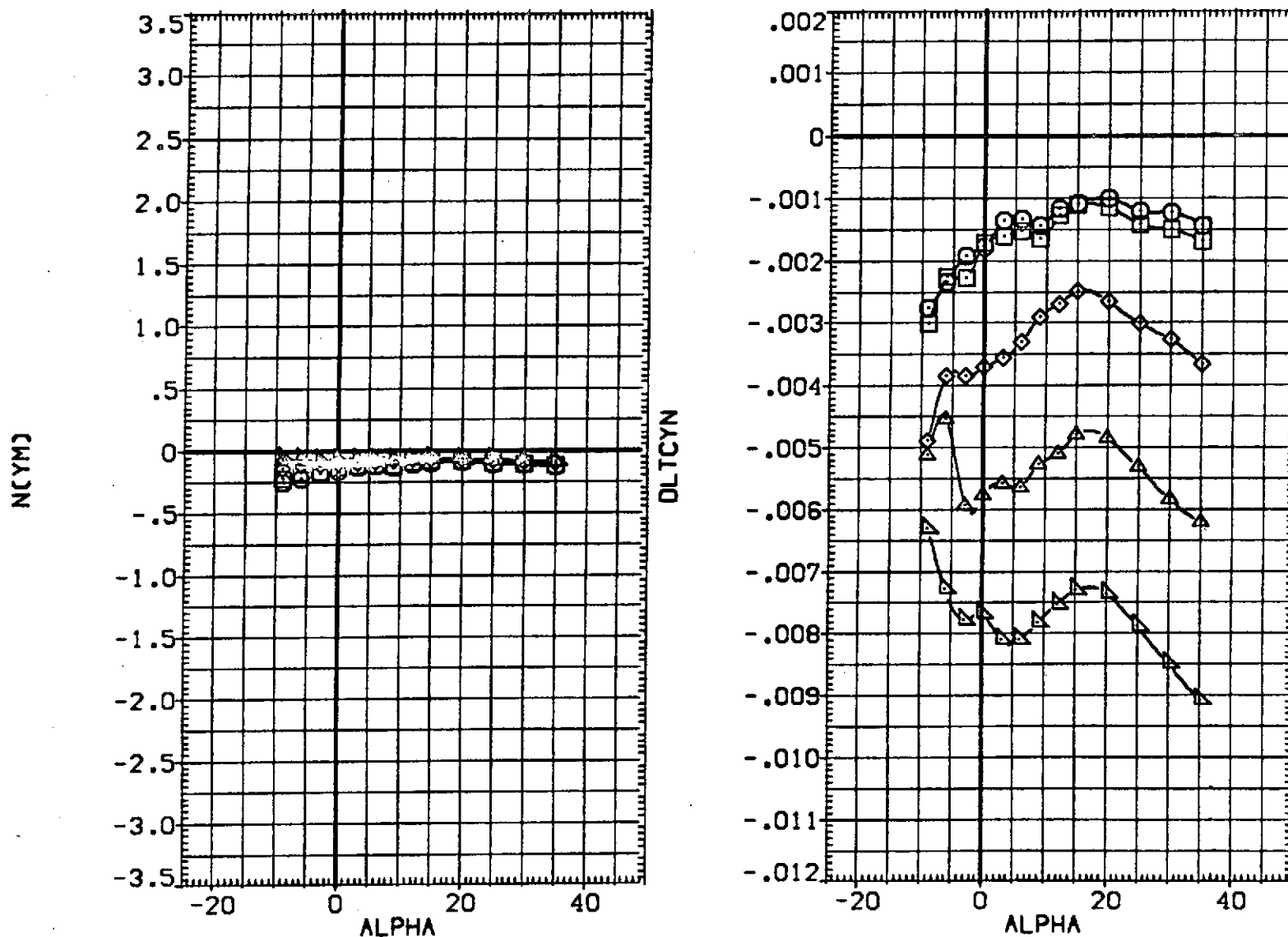


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS. Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC44] | OA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC45] | OA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC46] | OA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC47] | OA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |
| [CHLC48] | OA82 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 78.000 | 83.000 | 28.500 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 98.000 | 83.000 | 36.000 | LREF | 474.8100 IN. |
| 125.000 | 261.000 | 83.000 | 96.000 | BREF | 936.6800 IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 IN. |
| 125.000 | 702.000 | 89.000 | 256.000 | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

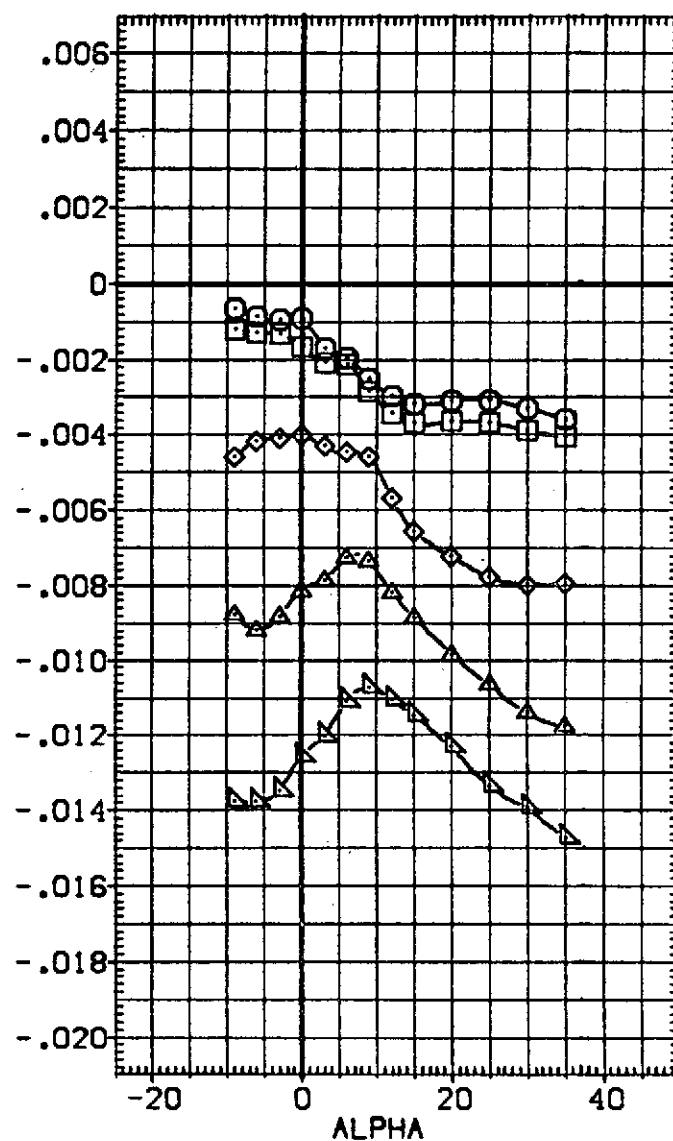
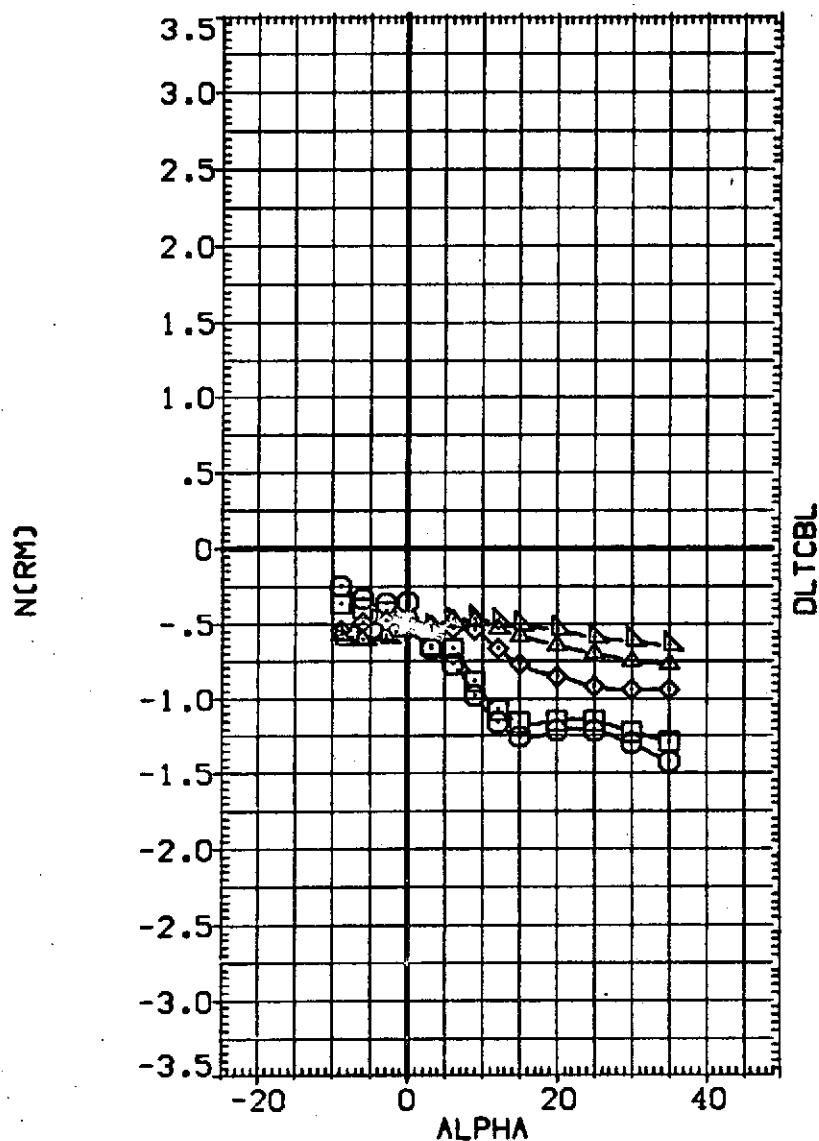


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|---------|-----------------------|-----------|---------|
| (CHLC44) | OA82 CFHT113 MODEL 32-0 DRB V/N49 (AIR) | 125.000 | 78.000 | 83.000 | 28.500 | SREF | 2690.0000 | 50. FT. |
| (CHLC45) | OA82 CFHT113 MODEL 32-0 DRB V/N49 (AIR) | 125.000 | 98.000 | 83.000 | 36.000 | LREF | 474.8100 | IN. |
| (CHLC46) | OA82 CFHT113 MODEL 32-0 DRB V/N49 (AIR) | 125.000 | 261.000 | 83.000 | 96.000 | BREF | 936.6800 | IN. |
| (CHLC47) | OA82 CFHT113 MODEL 32-0 DRB V/N49 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 | IN. |
| (CHLC48) | OA82 CFHT113 MODEL 32-0 DRB V/N49 (AIR) | 125.000 | 702.000 | 89.000 | 258.000 | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

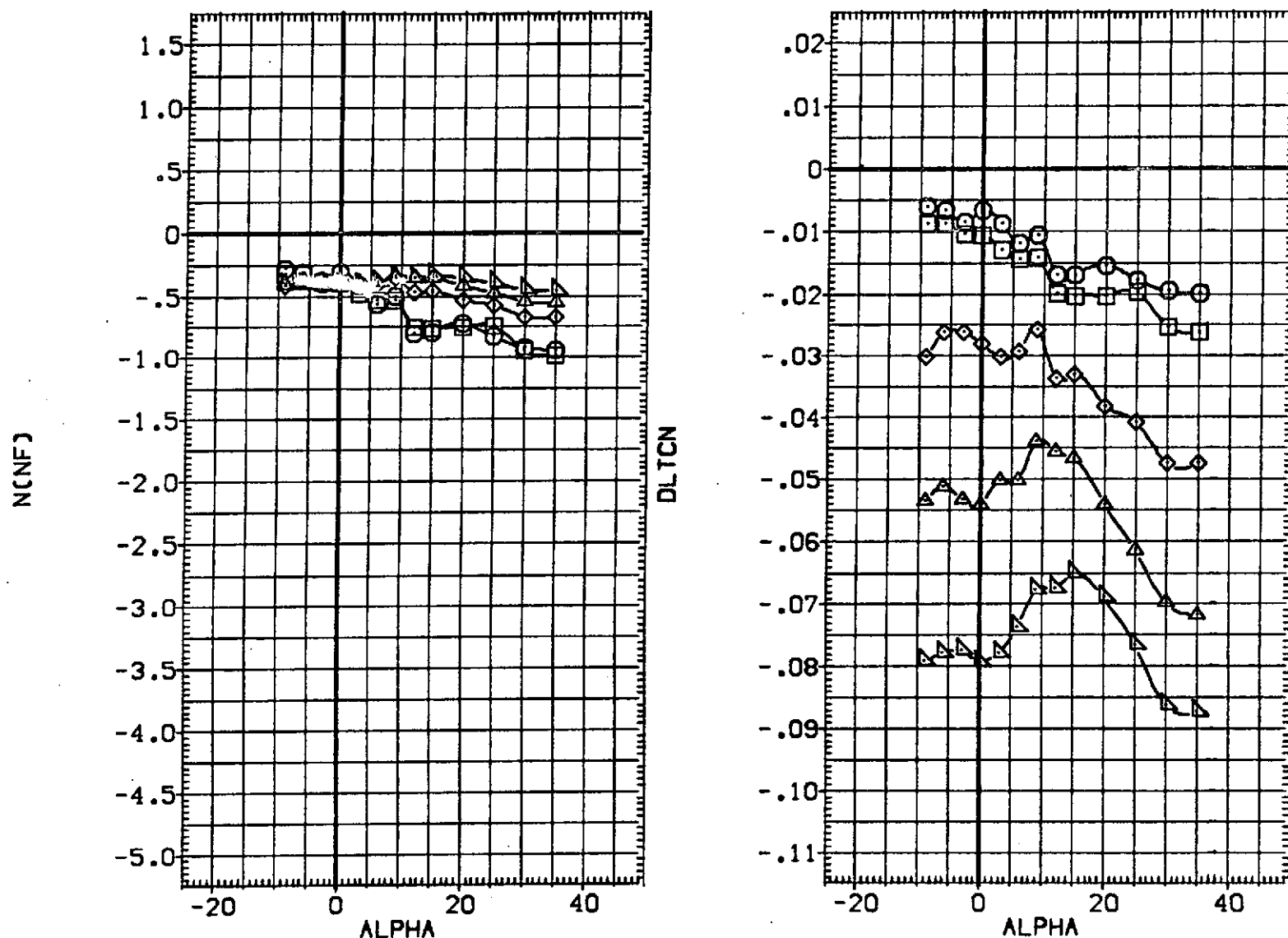


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, $Q(PSF) = 125$ ON AERO CHARACT
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC44) | QA82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC45) | QA82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC46) | QA82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC47) | QA82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |
| (CHLC48) | QA82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 125.000 | 78.000 | 83.000 | 28.500 | SREF | 2690.0000 | 50.FT. |
| 125.000 | 98.000 | 83.000 | 36.000 | LREF | 474.8100 | IN. |
| 125.000 | 261.000 | 83.000 | 96.000 | BREF | 936.6800 | IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 | IN. |
| 125.000 | 702.000 | 69.000 | 258.000 | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

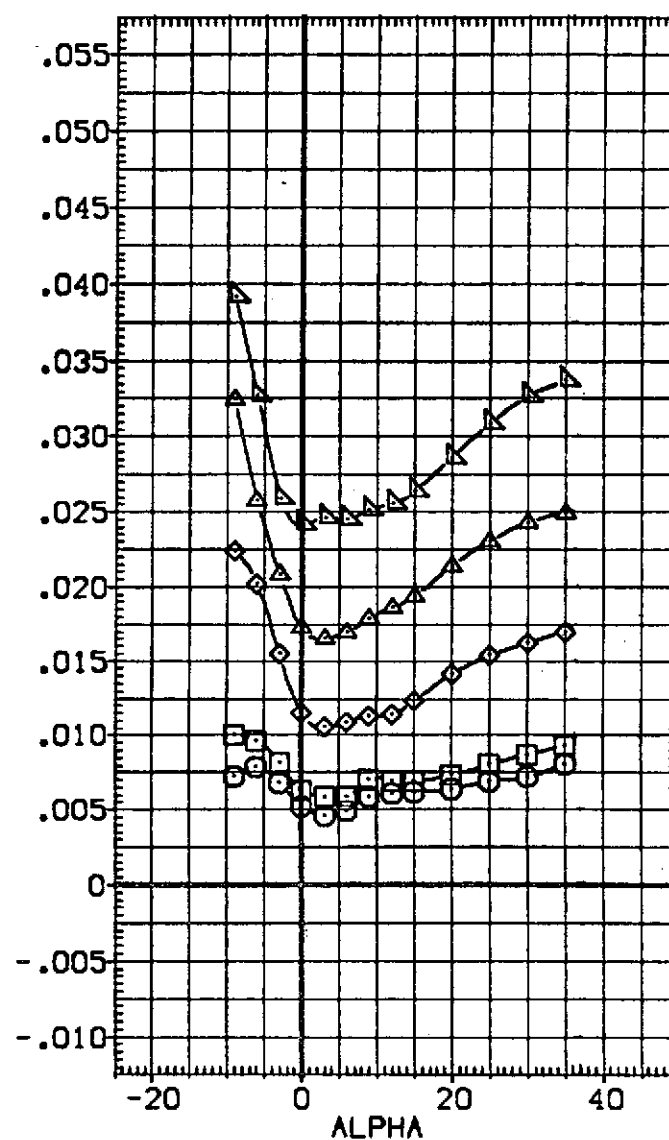
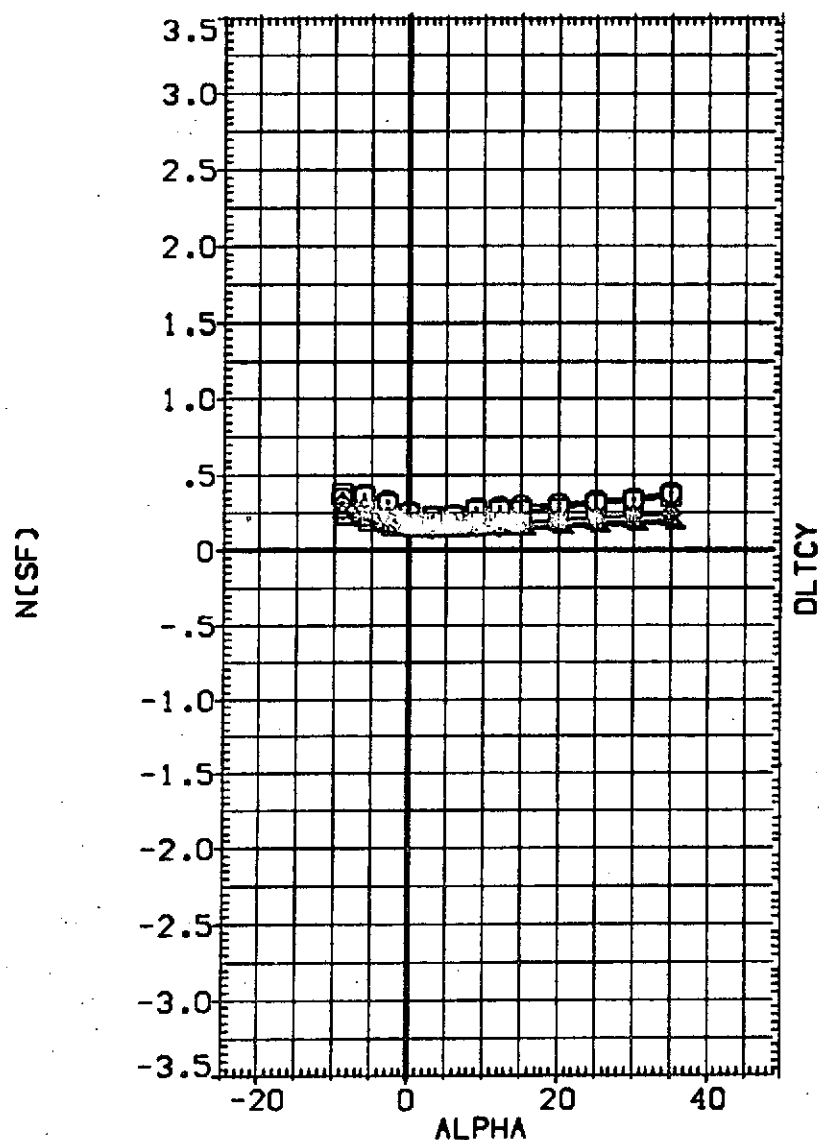


FIG. 23 EFFECT OF T/QA USING AIR WITH N49 JETS, $Q(PSF) = 125$ ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHL08) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL034) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 83.000 | 80.000 | 19.000 | LREF 474.8100 IN. |
| (RHL035) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 261.000 | 80.000 | 60.000 | BREF 936.6800 IN. |
| (RHL036) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 478.000 | 81.000 | 110.000 | XMRP 1076.7000 IN. |
| (RHL037) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 695.000 | 87.000 | 160.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

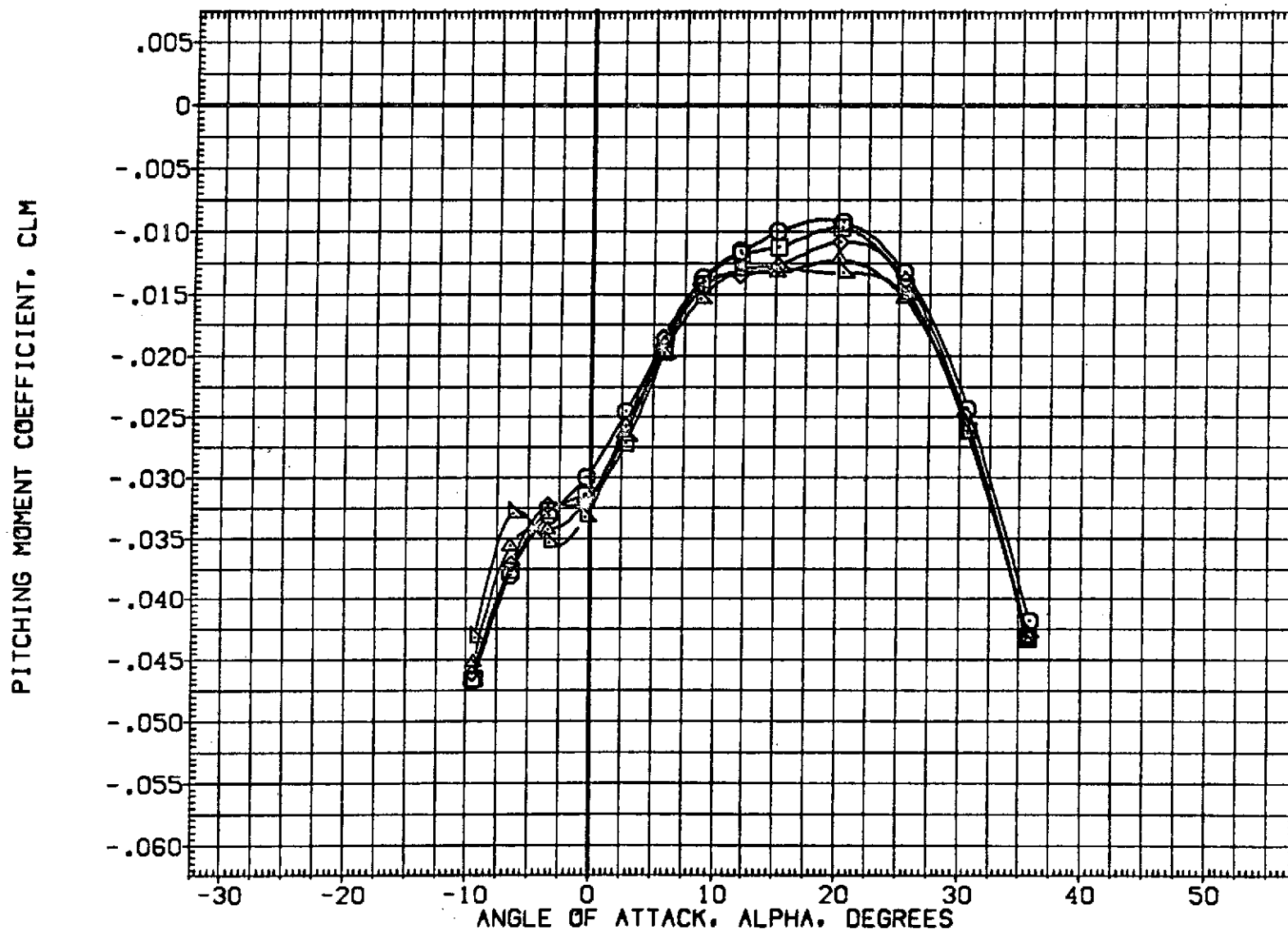


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|---------|-----------------------|-----------|--------|
| (RHL08) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHL034) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 83.000 | 80.000 | 19.000 | LREF | 474.8100 | IN. |
| (RHL035) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 261.000 | 80.000 | 60.000 | BREF | 936.6800 | IN. |
| (RHL036) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 478.000 | 81.000 | 110.000 | XMRP | 1076.7000 | IN. |
| (RHL037) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 695.000 | 87.000 | 160.000 | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

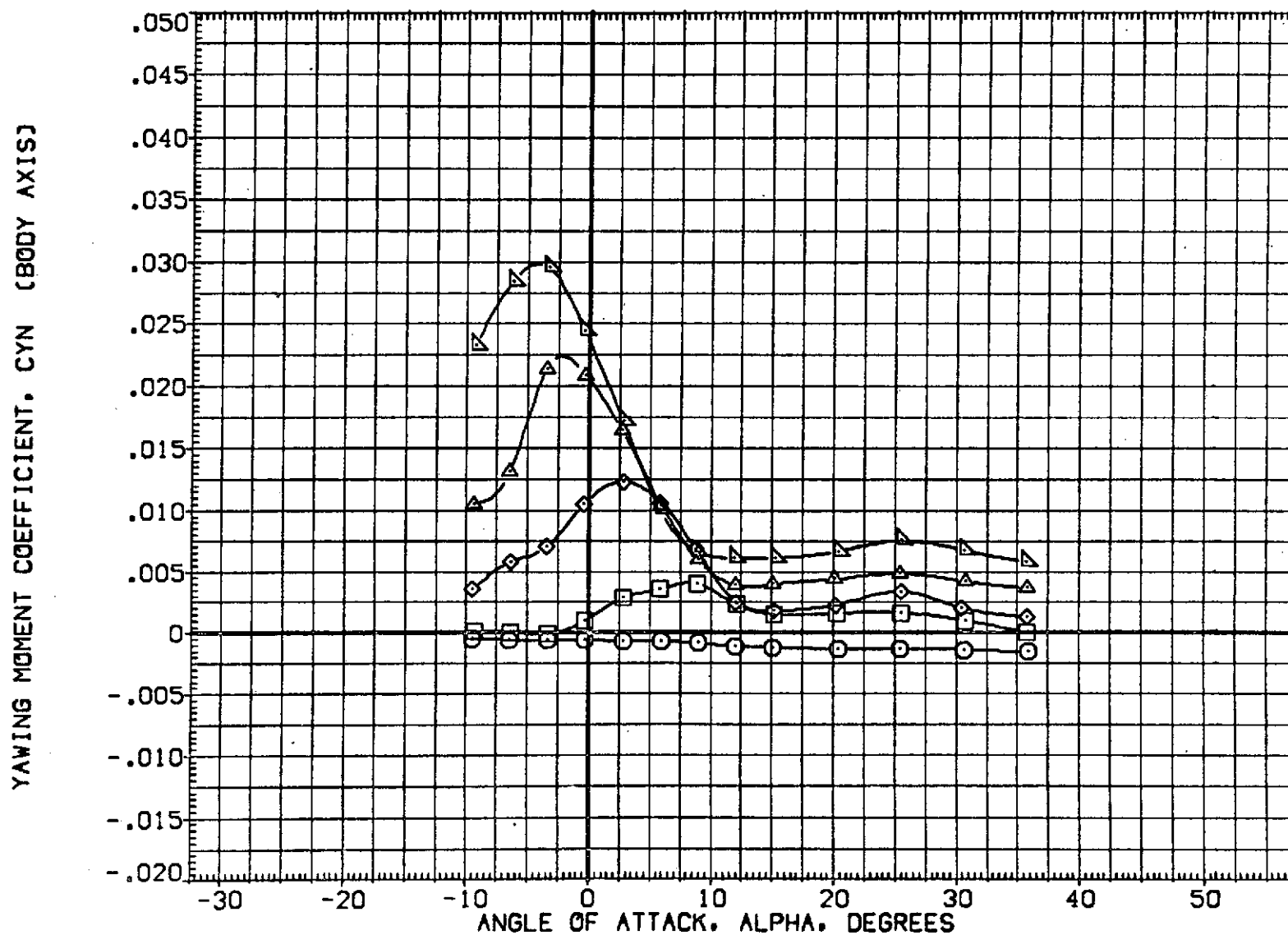


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 200 ON AERO CHARACT
(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| [R4LF08] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 RCS OFF | 200.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [R4L034] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 [AIR] | 200.000 | 83.000 | 80.000 | 19.000 | LREF 474.8100 IN. |
| [R4L035] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 [AIR] | 200.000 | 261.000 | 80.000 | 60.000 | BREF 936.6800 IN. |
| [R4L036] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 [AIR] | 200.000 | 478.000 | 81.000 | 110.000 | XMRP 1076.7000 IN. |
| [R4L037] | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 [AIR] | 200.000 | 695.000 | 87.000 | 160.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

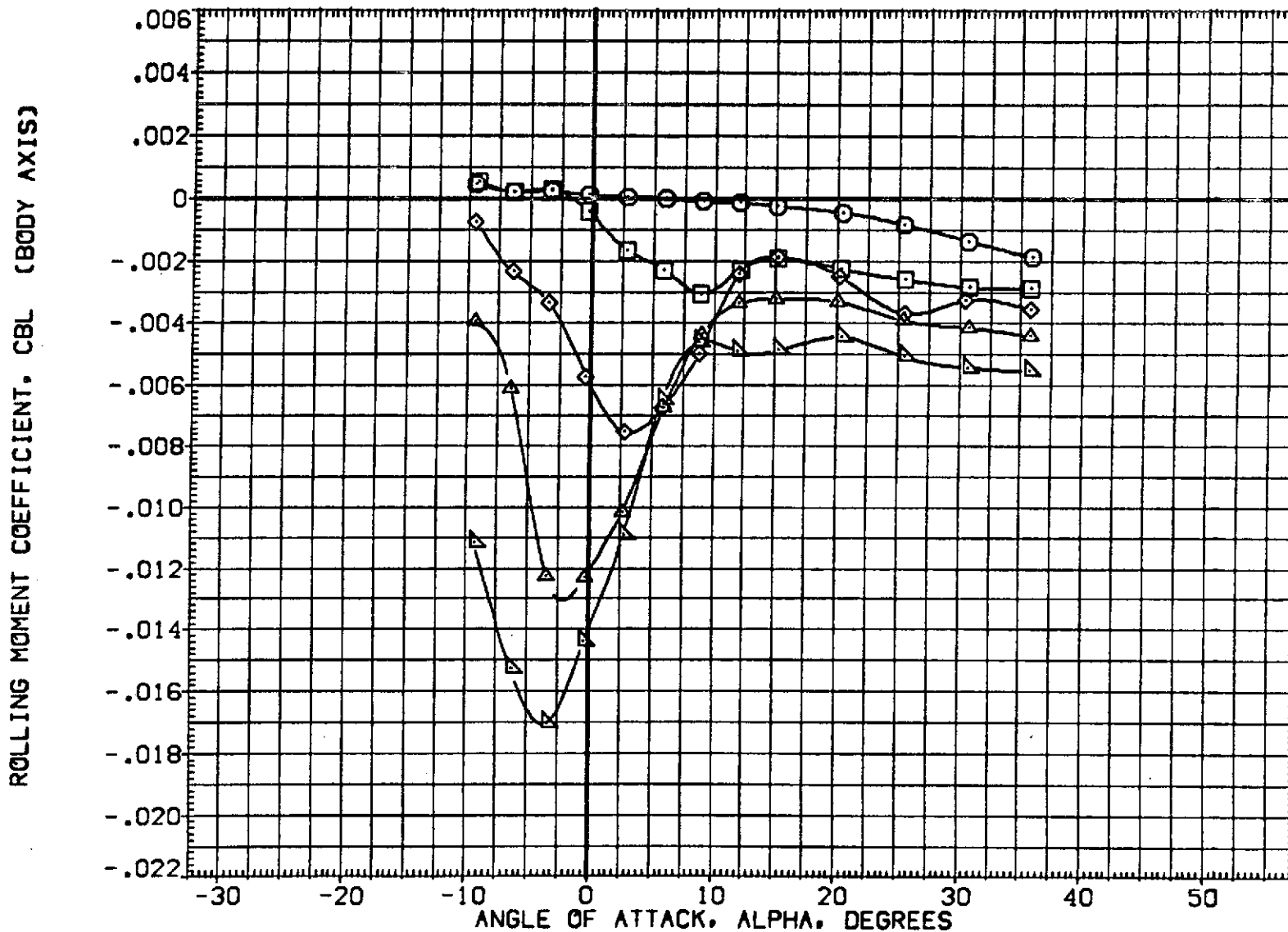


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHL08) | QA82 CFHT113 MODEL 32-0 ORB V/N4S RCS OFF | 200.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL034) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 83.000 | 80.000 | 19.000 | LREF 474.8100 IN. |
| (RHL035) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 261.000 | 80.000 | 60.000 | BREF 936.6800 IN. |
| (RHL036) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 478.000 | 81.000 | 110.000 | XMRP 1076.7000 IN. |
| (RHL037) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 695.000 | 87.000 | 160.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

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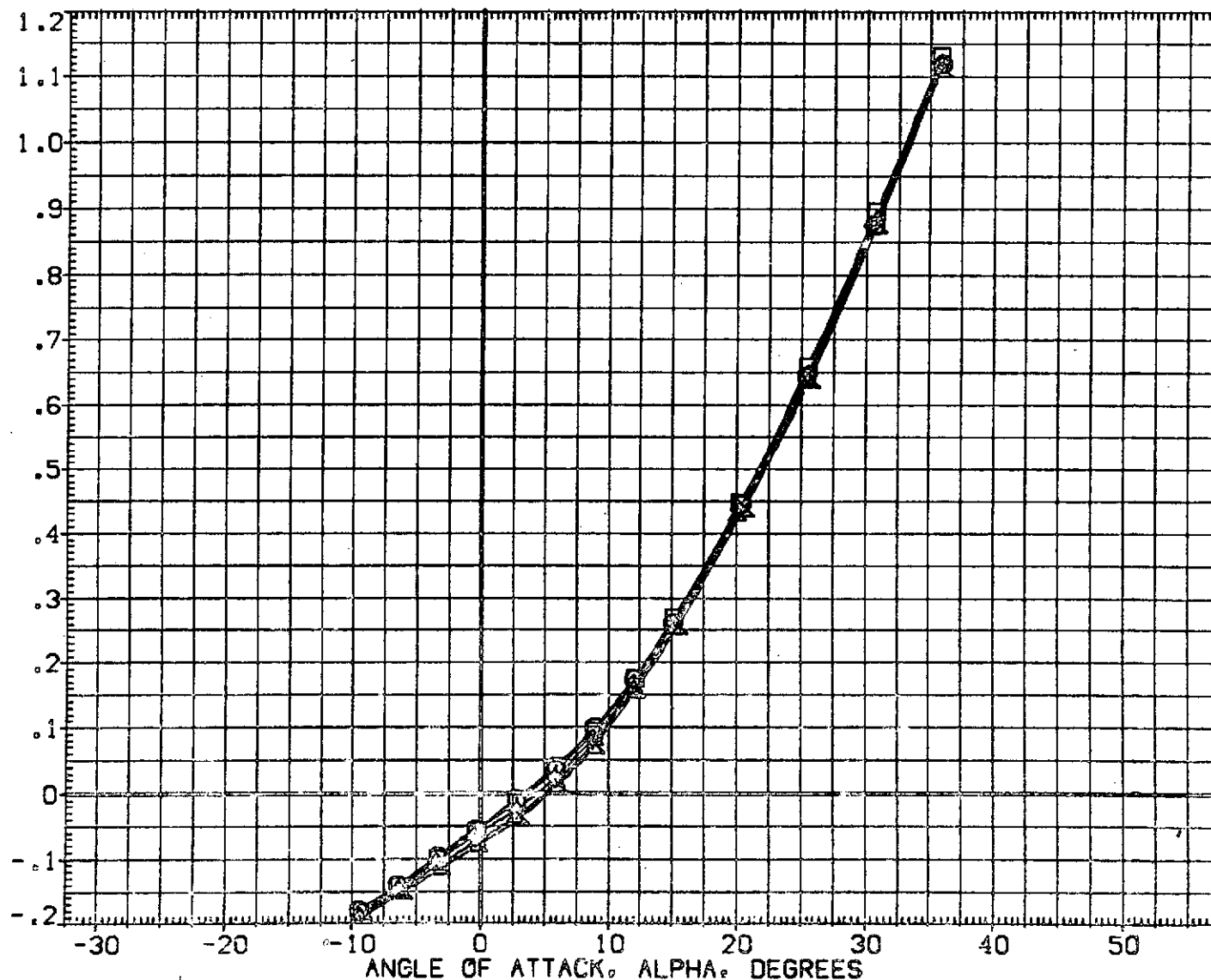


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS. Q(PSF)= 200 ON AERO CHARACT
(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|---------|-----------------------|-----------|---------|
| (RHLF08) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 200.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHL034) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 83.000 | 80.000 | 19.000 | LREF | 474.8100 | IN. |
| (RHL035) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 261.000 | 80.000 | 60.000 | BREF | 936.6900 | IN. |
| (RHL036) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 478.000 | 81.000 | 110.000 | XMRP | 1076.7000 | IN. |
| (RHL037) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 200.000 | 695.000 | 87.000 | 160.000 | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

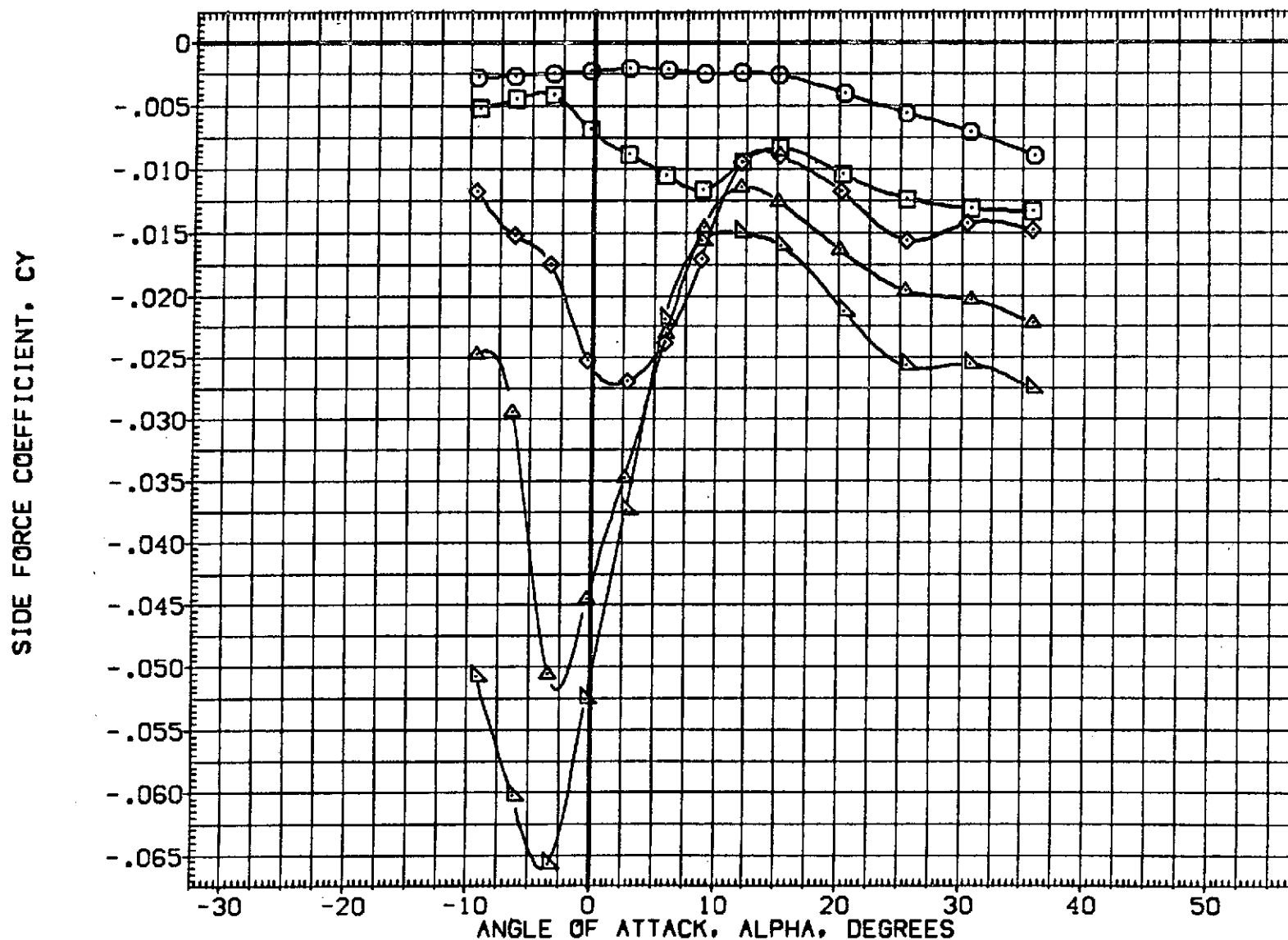


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, $Q(\text{PSF}) = 200$ ON AERO CHARACT

(A) MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | FORCS | TCRCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| [RHL030] | 0A82 CFHT113 MODEL 32-0 ORB V/N40 RCS GFF | 200.000 | .000 | .000 | .000 | SREF 2880.0000 SQ.FT. |
| [RHL034] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] | 200.000 | 83.000 | 80.000 | 19.000 | LREF 474.8100 IN. |
| [RHL035] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] | 200.000 | 261.000 | 80.000 | 60.000 | BREF 936.6800 IN. |
| [RHL036] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] | 200.000 | 478.000 | 81.000 | 110.000 | XMRP 1076.7000 IN. |
| [RHL037] | 0A82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] | 200.000 | 695.000 | 87.000 | 160.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

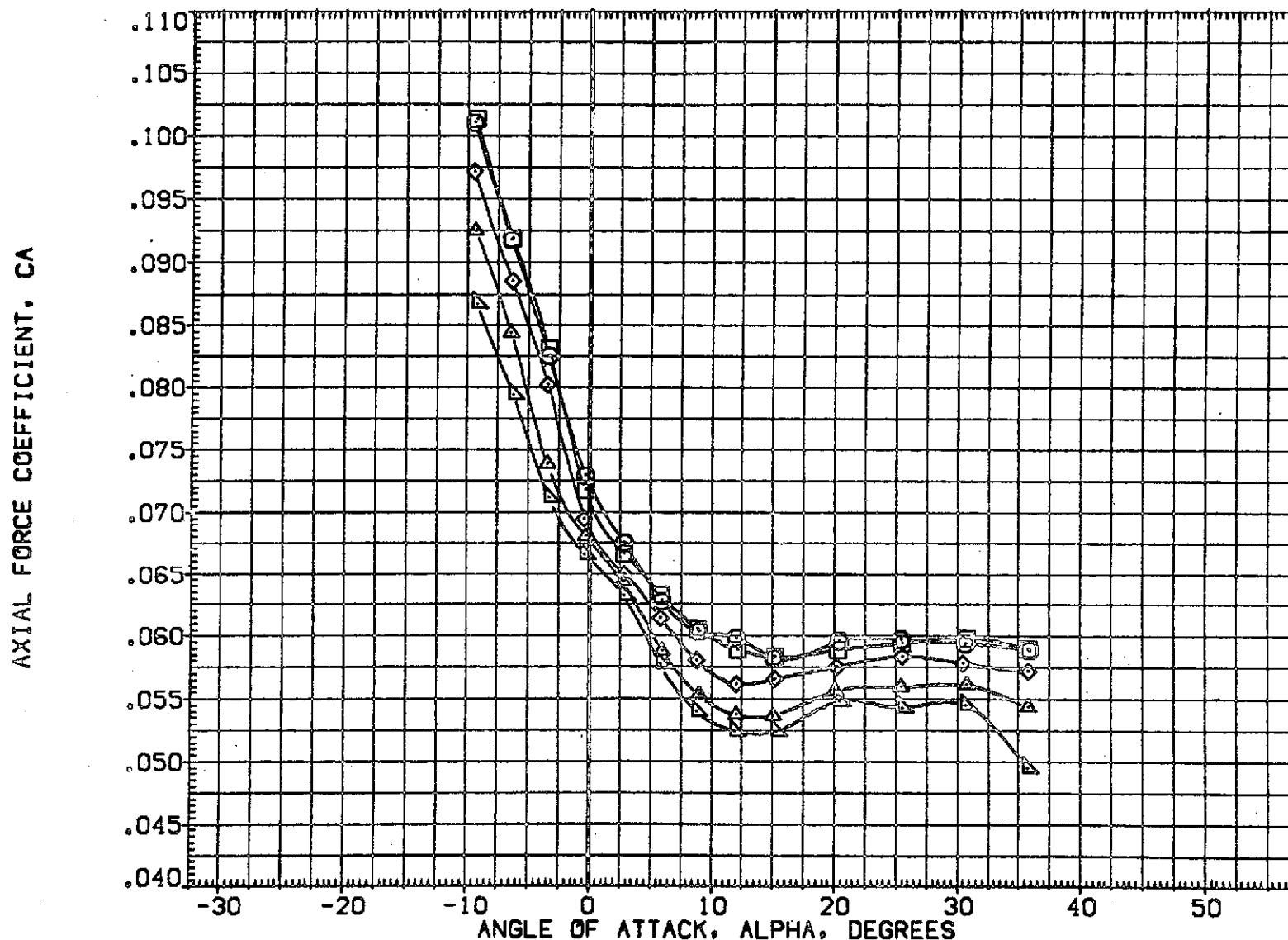


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.34

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC34] ○ | 0A82 CFHT113 MODEL 32-0 GR3 V/N52 (AIR) |
| [CHLC35] □ | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) |
| [CHLC36] × | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) |
| [CHLC37] △ | 0A82 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 200.000 | 83.000 | 80.000 | 19.000 | SREF | 2690.0000 SQ.FT. |
| 200.000 | 261.000 | 80.000 | 60.000 | LREF | 474.8100 IN. |
| 200.000 | 478.000 | 81.000 | 110.000 | BREF | 936.6500 IN. |
| 200.000 | 655.000 | 87.000 | 160.000 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

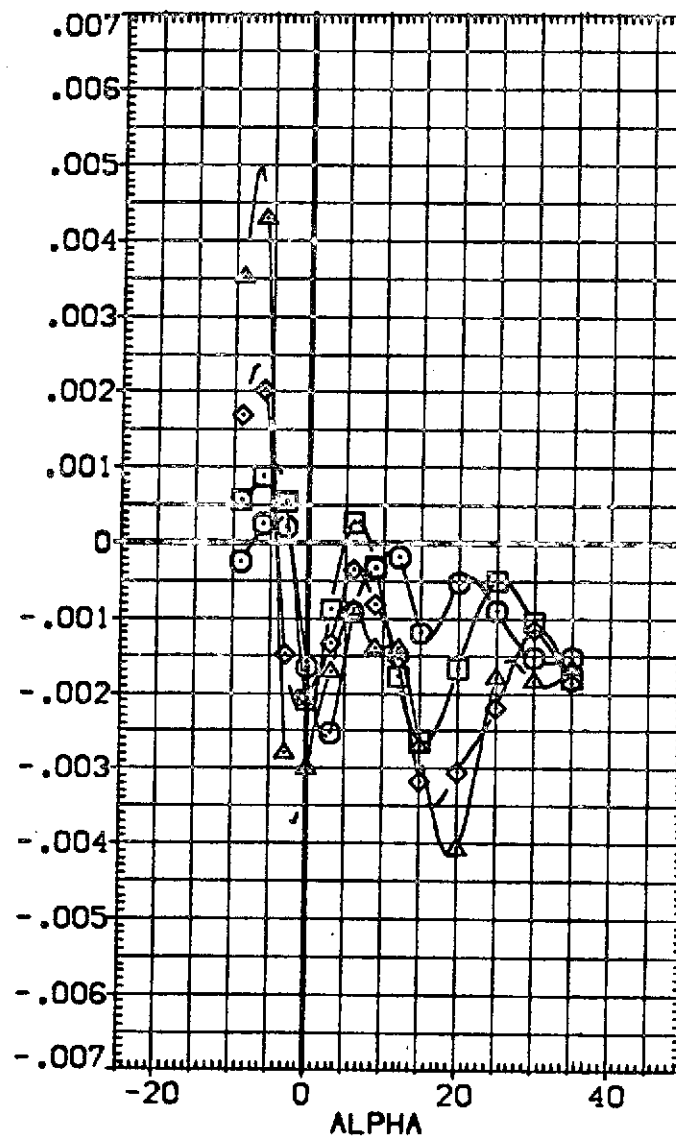
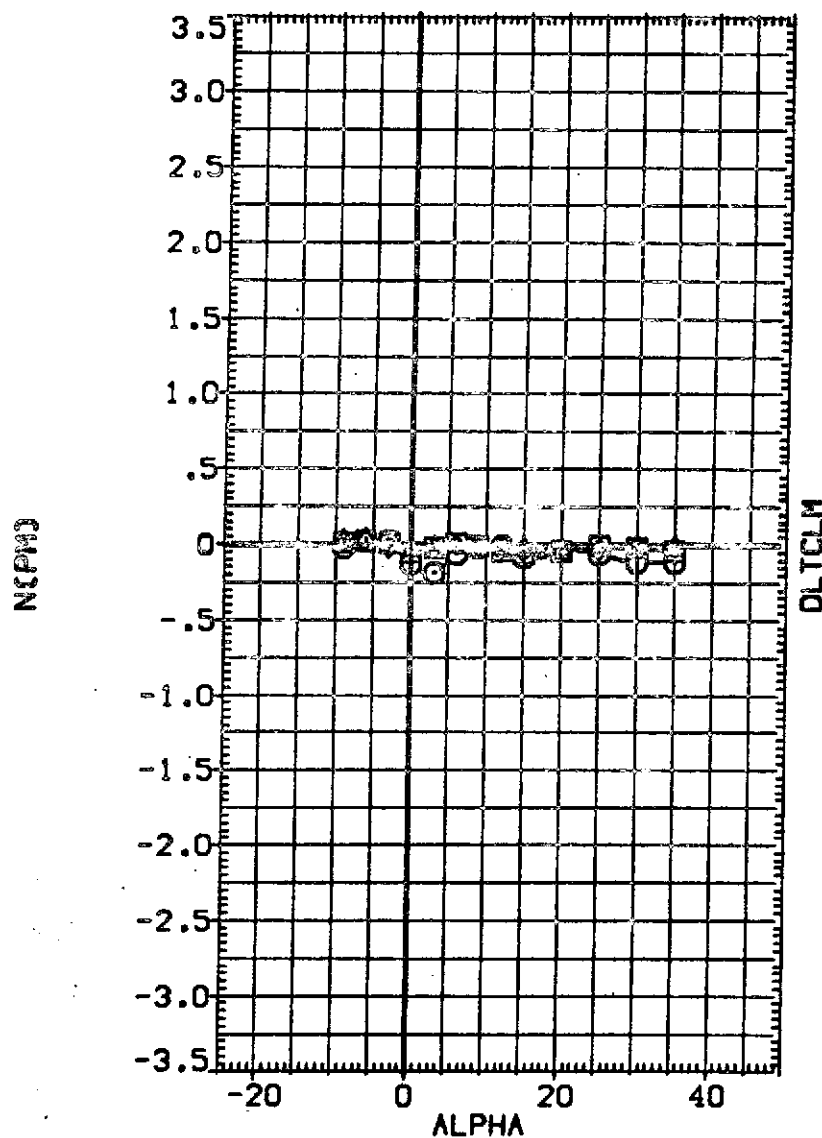


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC34] | QAB2 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |
| [CHLC35] | QAB2 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |
| [CHLC36] | QAB2 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |
| [CHLC37] | QAB2 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|---------|
| 200.000 | 83.000 | 80.000 | 19.000 | SREF | 2690.0000 | 50. FT. |
| 200.000 | 261.000 | 80.000 | 60.000 | LREF | 474.8100 | IN. |
| 200.000 | 478.000 | 81.000 | 110.000 | BREF | 936.6800 | IN. |
| 200.000 | 695.000 | 87.000 | 160.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

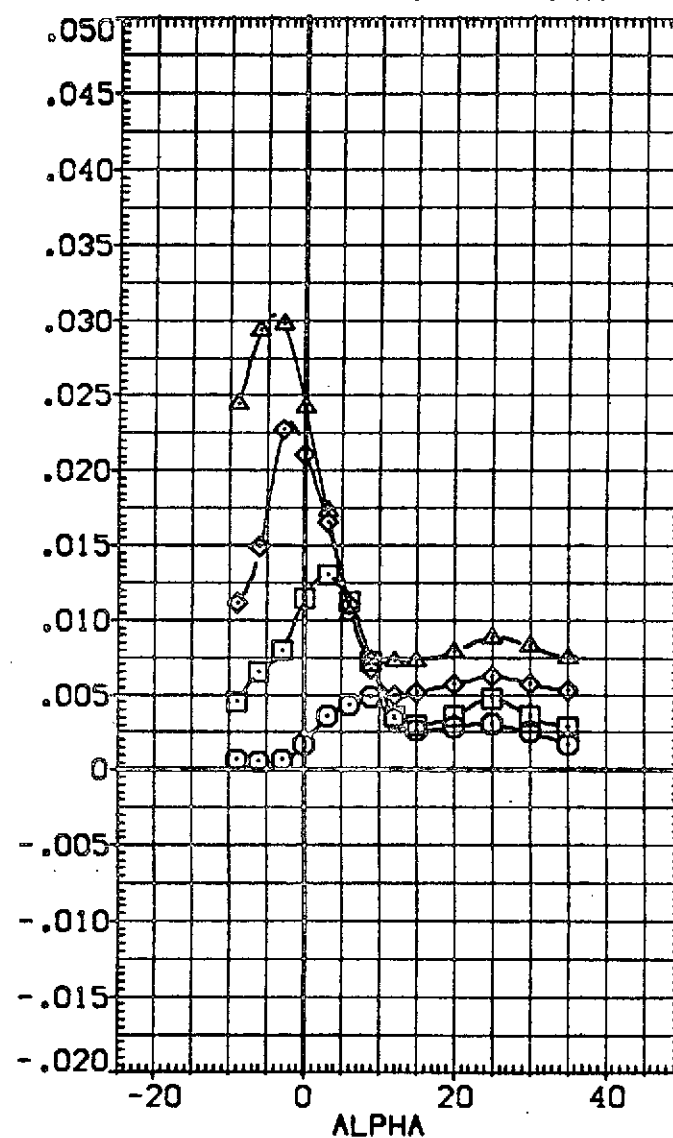
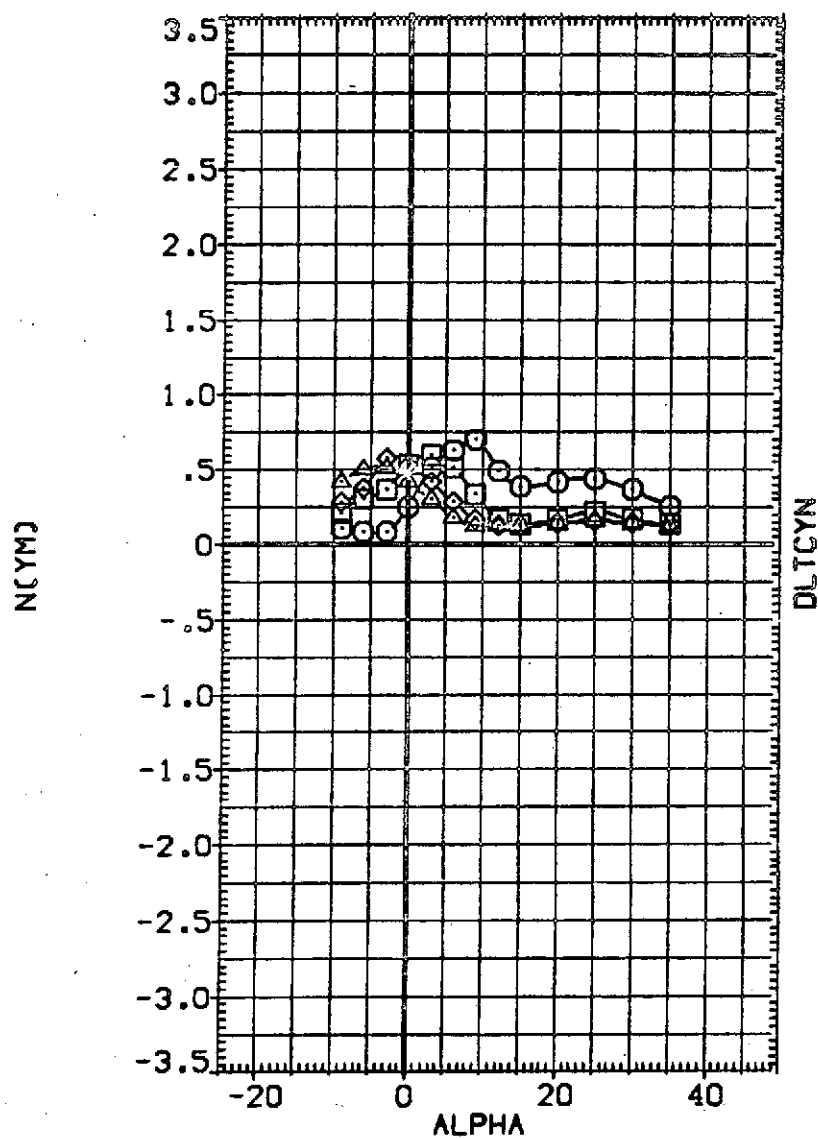


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS. Q(PSF)= 200 ON AERO CHARACT

(A1MACH = 10.30

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| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC34] ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| [CHLC35] □ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| [CHLC36] ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| [CHLC37] △ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |

| Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|---------|
| 200.000 | 83.000 | 80.000 | 19.000 | SREF | 2690.0000 | 50. FT. |
| 200.000 | 261.000 | 80.000 | 60.000 | LREF | 474.8100 | IN. |
| 200.000 | 478.000 | 81.000 | 110.000 | BREF | 936.6600 | IN. |
| 200.000 | 695.000 | 87.000 | 160.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

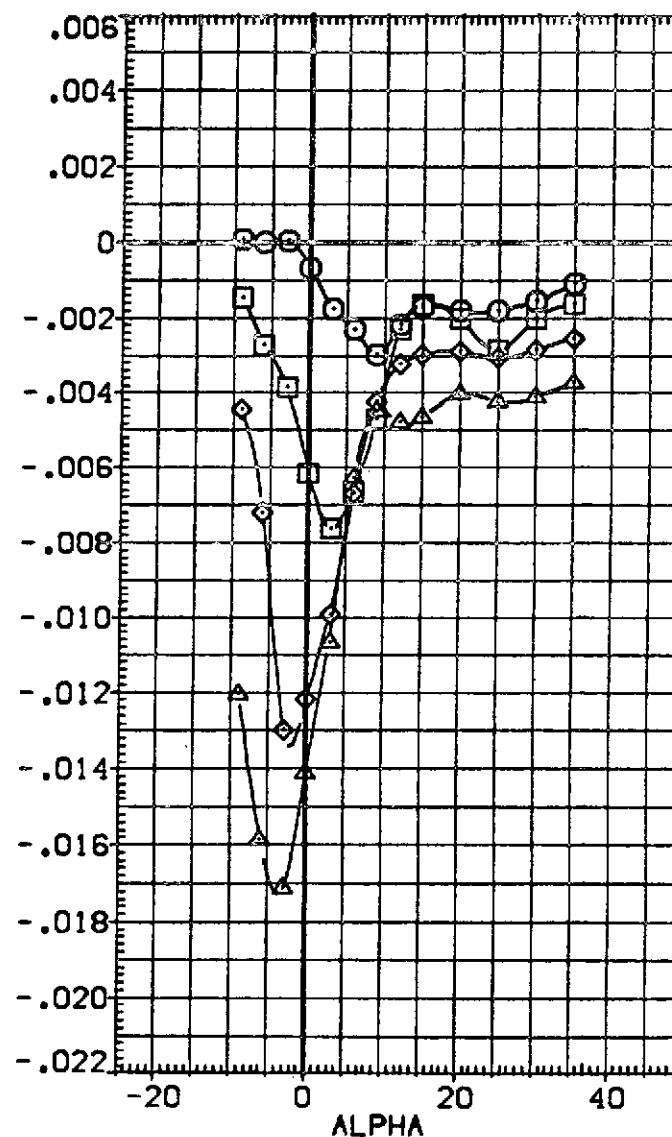
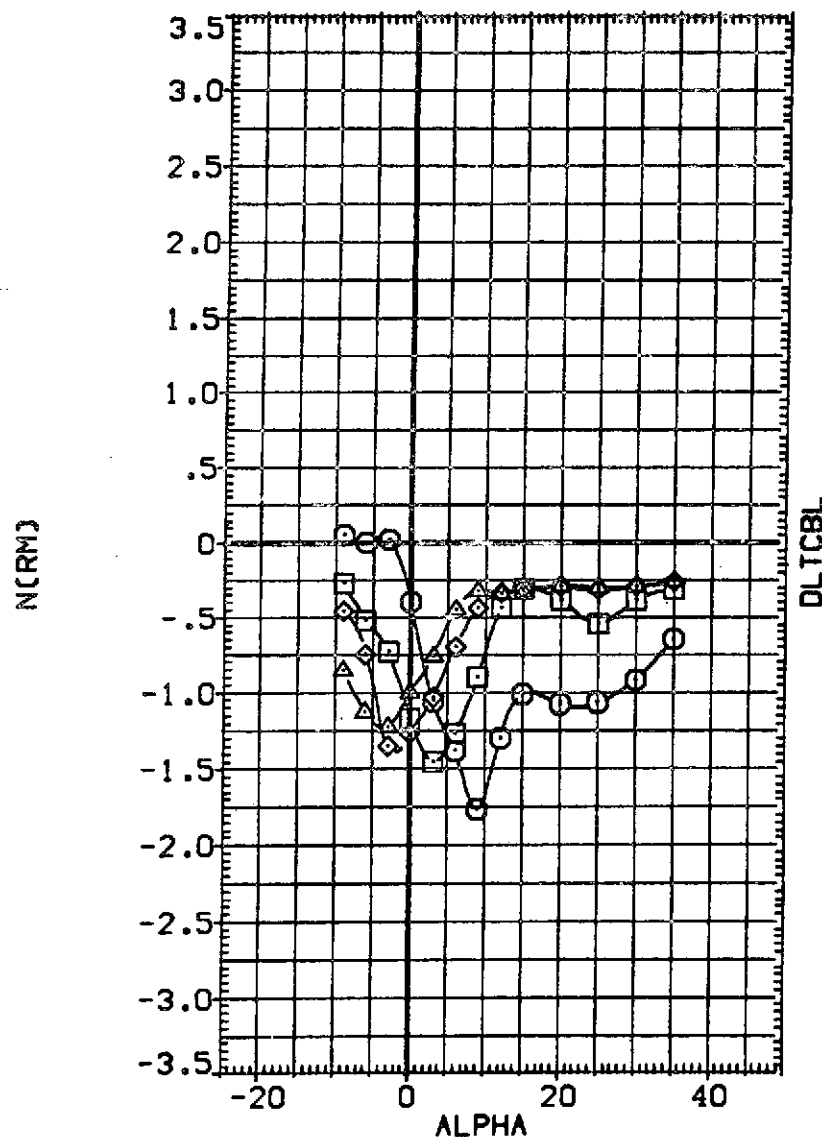


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC34] | OA82 CFHT113 MODEL 32-0 GR8 V/N52 | (AIR) |
| [CHLC35] | OA82 CFHT113 MODEL 32-0 GR8 V/N52 | (AIR) |
| [CHLC36] | OA82 CFHT113 MODEL 32-0 GR8 V/N52 | (AIR) |
| [CHLC37] | OA82 CFHT113 MODEL 32-0 GR8 V/N52 | (AIR) |

| Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 200.000 | 63.000 | 80.000 | 19.000 | SREF | 2690.0000 | 80.FT. |
| 200.000 | 261.000 | 80.000 | 60.000 | LREF | 474.8100 | IN. |
| 200.000 | 478.000 | 81.000 | 110.000 | BREF | 936.6800 | IN. |
| 200.000 | 695.000 | 87.000 | 160.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

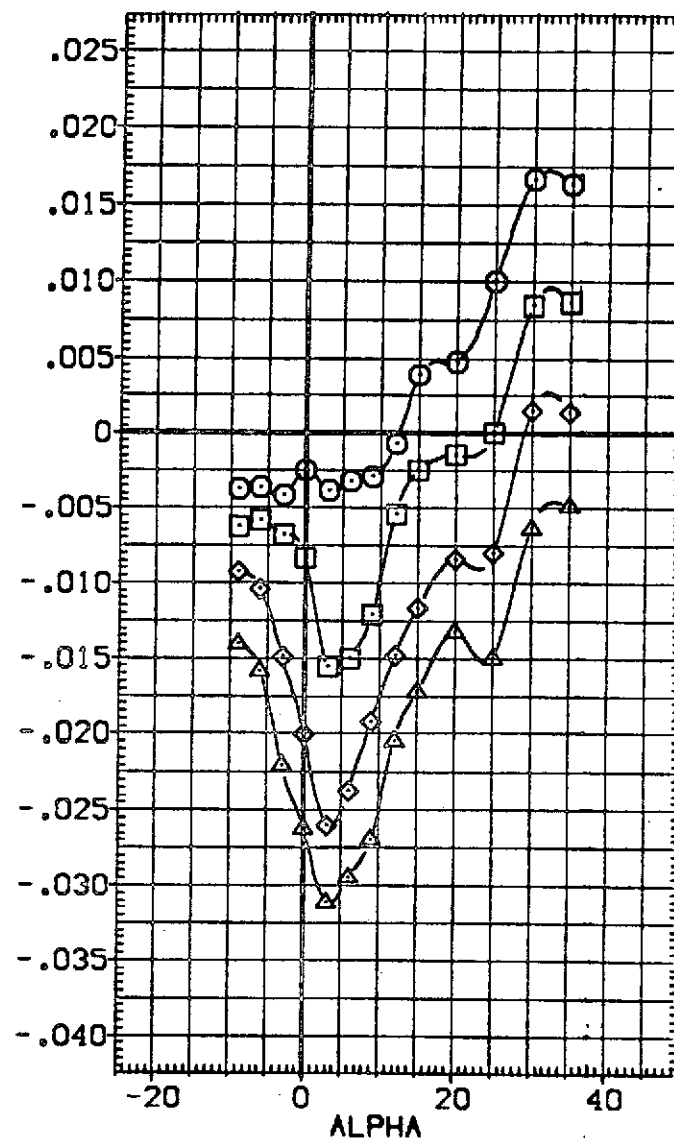
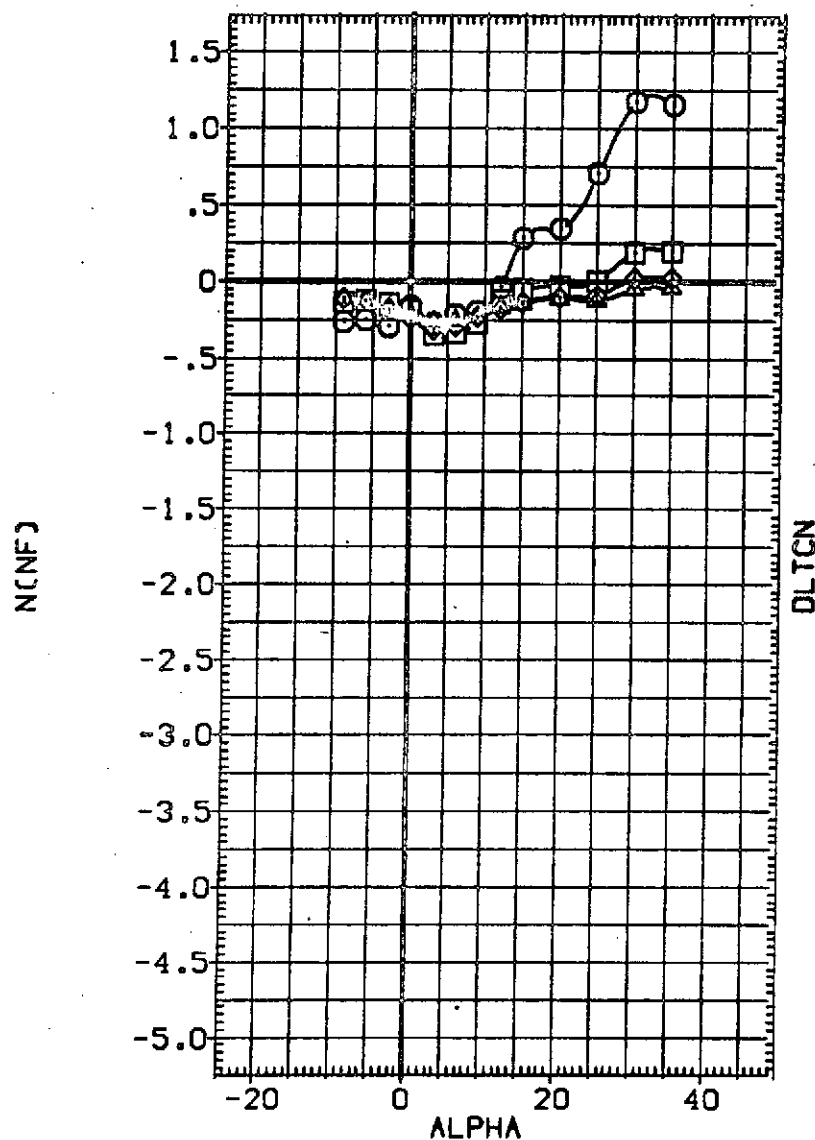


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, $Q(PSF) = 200$ ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| {CHLC34} | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| {CHLC35} | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| {CHLC36} | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |
| {CHLC37} | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|---------|-----------------------|
| 200.000 | 83.000 | 80.000 | 19.000 | SREF 2690.0000 SQ.FT. |
| 200.000 | 261.000 | 80.000 | 60.000 | LREF 474.8100 IN. |
| 200.000 | 478.000 | 81.000 | 110.000 | BREF 936.6800 IN. |
| 200.000 | 695.000 | 87.000 | 160.000 | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

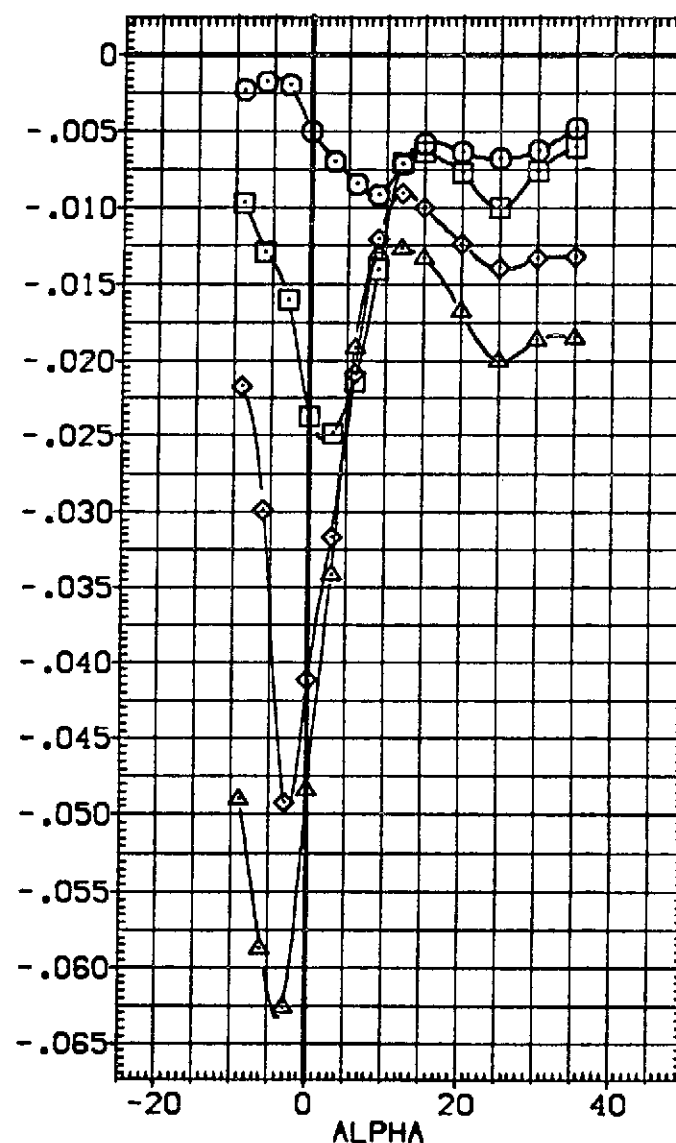
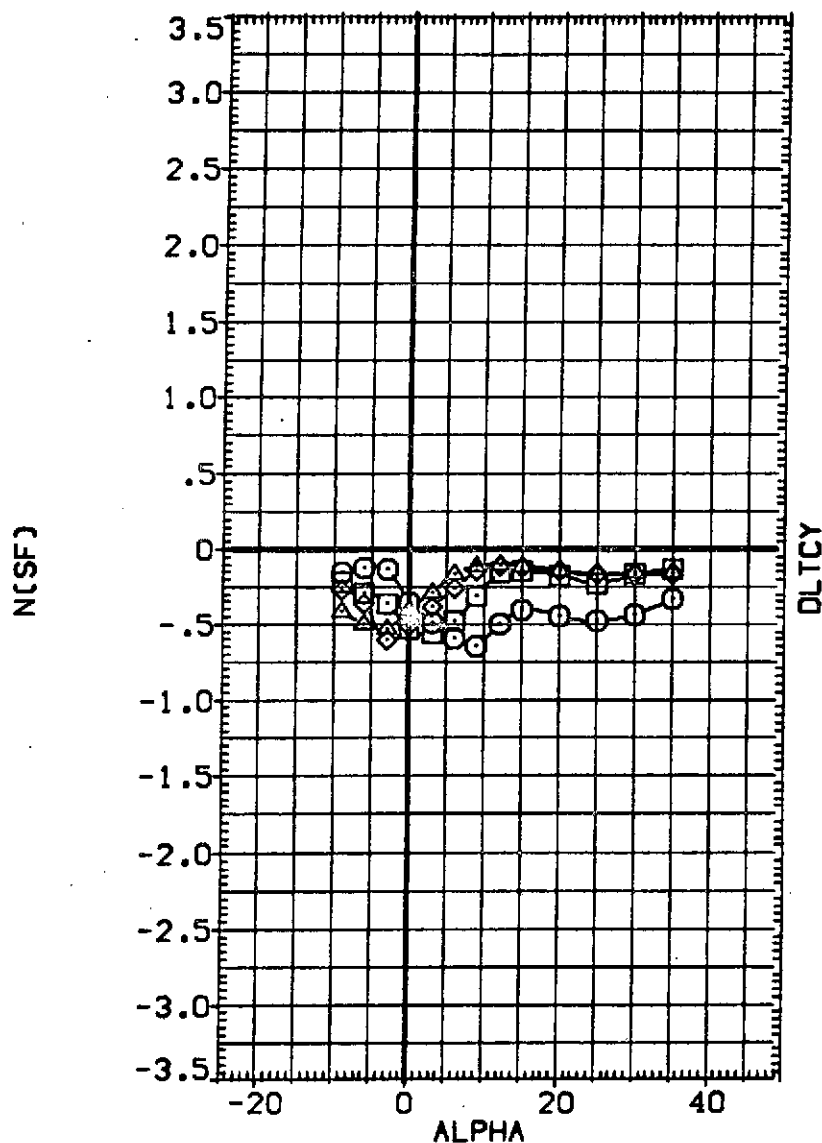


FIG. 24 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 200 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| [R-L035] | DATA | | | | | |
| [R-L036] | DATA | | | | | |
| [R-L039] | DATA | | | | | |
| [R-L040] | DATA | | | | | |
| [R-L041] | DATA | | | | | |
| [R-L042] | DATA | | | | | |
| | QAB2 CFHT113 MODEL 32-0 GRB V/M19 RCS OFF | 125.000 | 78.000 | 82.000 | 28.500 | SREF 2690.0000 SQ.FT. |
| | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 125.000 | 78.000 | 82.000 | 28.500 | LREF 474.9100 IN. |
| | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 125.000 | 99.000 | 82.000 | 38.000 | BREF 936.6800 IN. |
| | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 125.000 | 261.000 | 79.000 | 96.000 | XMRP 1076.7000 IN. |
| | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | YMRP .0000 IN. |
| | QAB2 CFHT113 MODEL 32-0 GRB V/N52 (AIR) | 125.000 | 702.000 | 88.000 | 258.000 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

PITCHING MOMENT COEFFICIENT, CLM

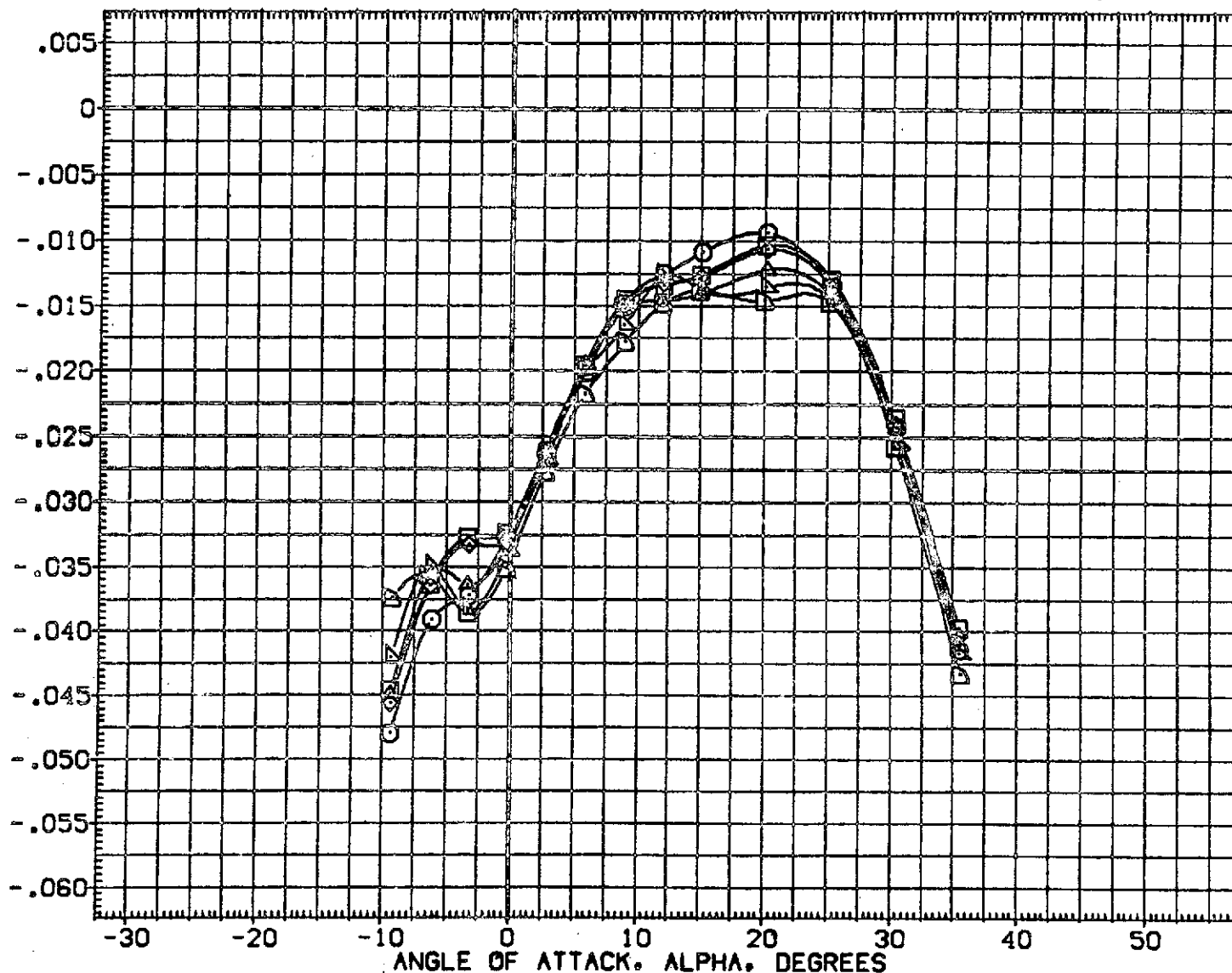


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| [R]LF05) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2680.0000 SQ.FT. |
| [R]LF038) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 78.000 | 82.000 | 28.500 | LREF 474.8100 IN. |
| [R]LF039) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 98.000 | 82.000 | 36.000 | BREF 936.6800 IN. |
| [R]LF040) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 261.000 | 79.000 | 96.000 | XMRF 1076.7000 IN. |
| [R]LF041) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | YMRF .0000 IN. |
| [R]LF042) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 702.000 | 88.000 | 258.000 | ZMRF 375.0000 IN. |
| | | | | | SCALE | .0100 |

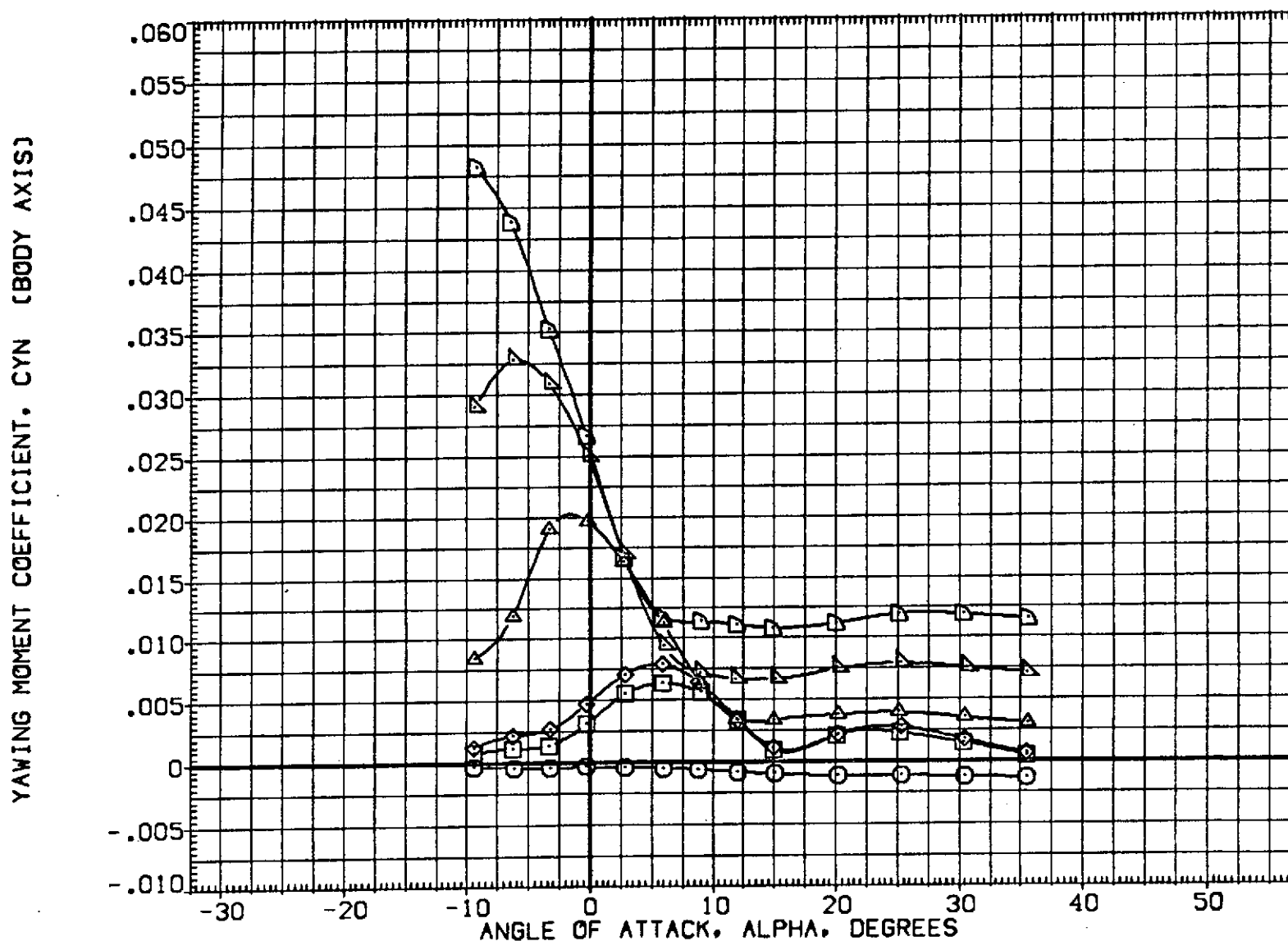


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, $Q(\text{PSF}) = 125$ ON AERO CHARACT
 (A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (R4LF05) | 0A82 CFHT113 MODEL 32-G GR8 V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (R4LF038) | 0A82 CFHT113 MODEL 32-G GR8 V/N52 [AIR] | 125.000 | 78.000 | 82.000 | 28.500 | LREF 474.8100 IN. |
| (R4LF039) | 0A82 CFHT113 MODEL 32-G GR8 V/N52 [AIR] | 125.000 | 98.000 | 82.000 | 36.000 | BREF 936.6800 IN. |
| (R4LF040) | 0A82 CFHT113 MODEL 32-G GR8 V/N52 [AIR] | 125.000 | 261.000 | 79.000 | 96.000 | XMRP 1076.7000 IN. |
| (R4LF041) | 0A82 CFHT113 MODEL 32-G GR8 V/N52 [AIR] | 125.000 | 473.000 | 83.000 | 174.000 | YMRP .0000 IN. |
| (R4LF042) | 0A82 CFHT113 MODEL 32-G GR8 V/N52 [AIR] | 125.000 | 702.000 | 88.000 | 258.000 | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

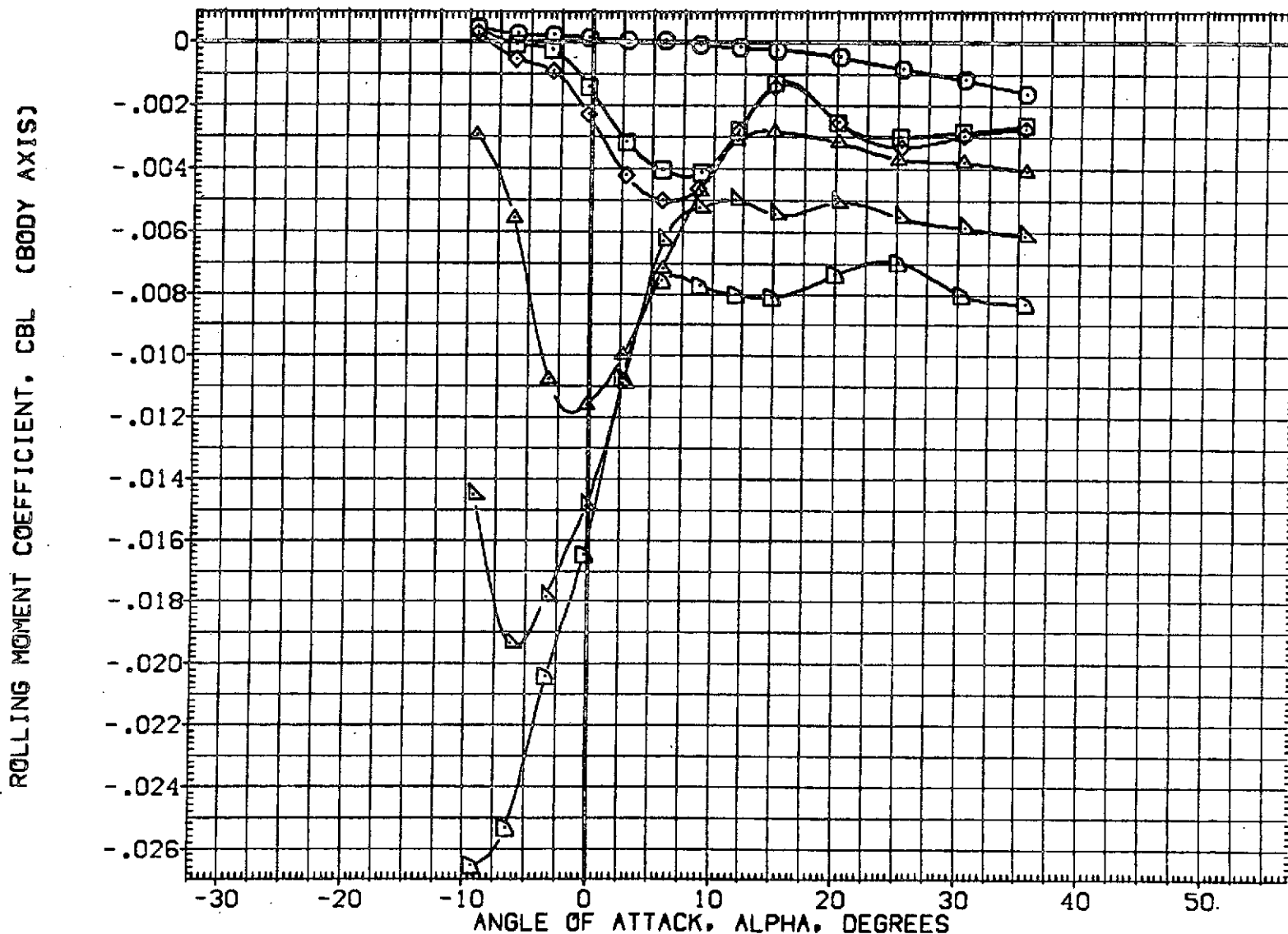


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|---------|-----------------------|------------------|
| (RHL05) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL038) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 78.000 | 82.000 | 28.500 | LREF | 474.8100 IN. |
| (RHL039) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 98.000 | 82.000 | 36.000 | BREF | 936.6800 IN. |
| (RHL040) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 261.000 | 79.000 | 96.000 | XMRP | 1076.7000 IN. |
| (RHL041) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | YMRP | .0000 IN. |
| (RHL042) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 125.000 | 702.000 | 88.000 | 258.000 | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

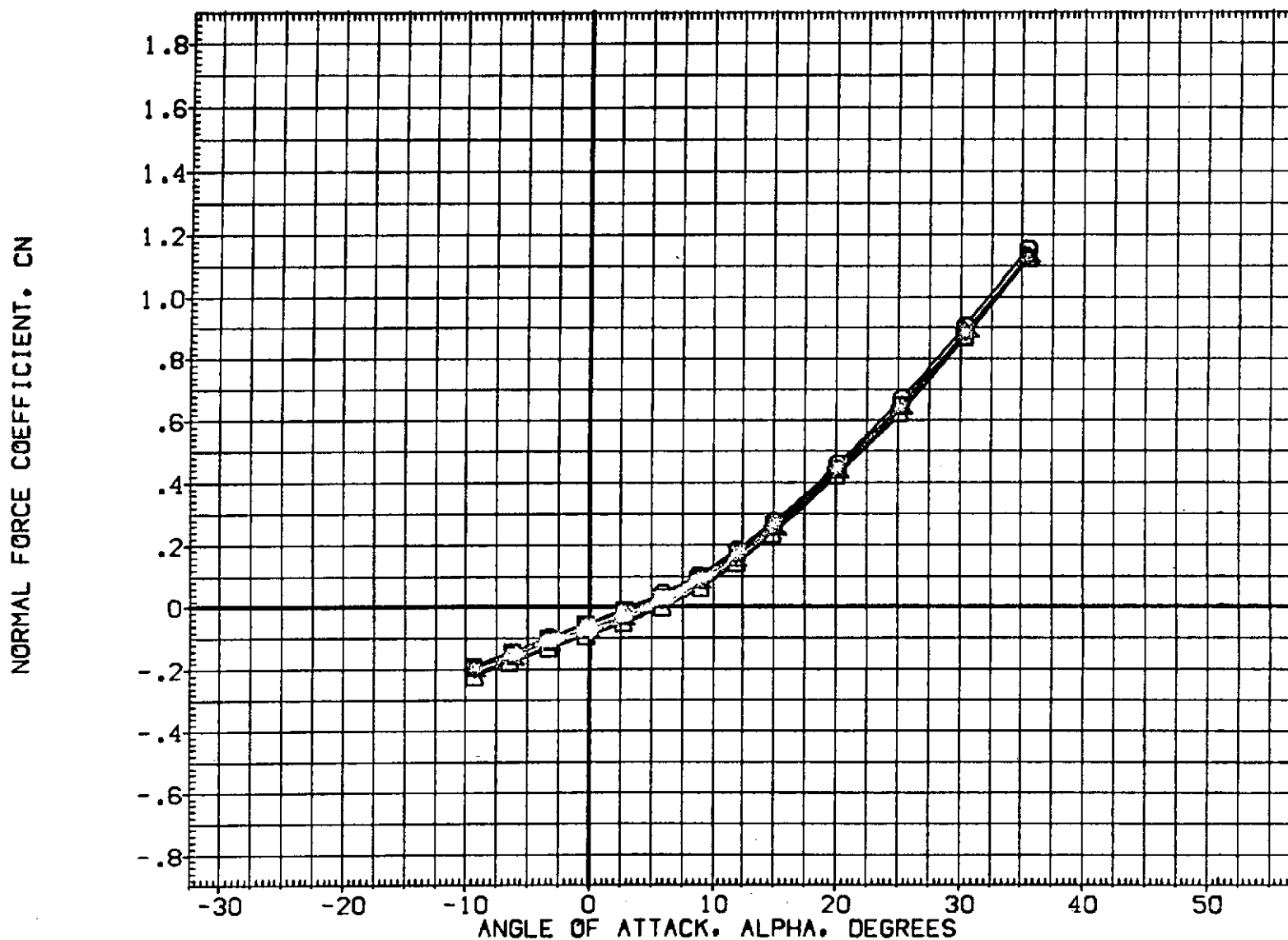


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| [RFL05] | QAB2 CFHT113 MODEL 32-0 CR8 V/N48 RCS GFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [RFL036] | QAB2 CFHT113 MODEL 32-0 CR8 V/N52 [AIR] | 125.000 | 78.000 | 82.000 | 28.500 | LREF 474.8100 IN. |
| [RFL039] | QAB2 CFHT113 MODEL 32-0 CR8 V/N52 [AIR] | 125.000 | 98.000 | 82.000 | 36.000 | BREF 935.6800 IN. |
| [RFL040] | QAB2 CFHT113 MODEL 32-0 CR8 V/N52 [AIR] | 125.000 | 261.000 | 79.000 | 95.000 | XMRF 1076.7000 IN. |
| [RFL041] | QAB2 CFHT113 MODEL 32-0 CR8 V/N52 [AIR] | 125.000 | 473.000 | 83.000 | 174.000 | YMRF .0000 IN. |
| [RFL042] | QAB2 CFHT113 MODEL 32-0 CR8 V/N52 [AIR] | 125.000 | 702.000 | 88.000 | 258.000 | ZMRF 375.0000 IN. |
| | | | | | SCALE | .0100 |

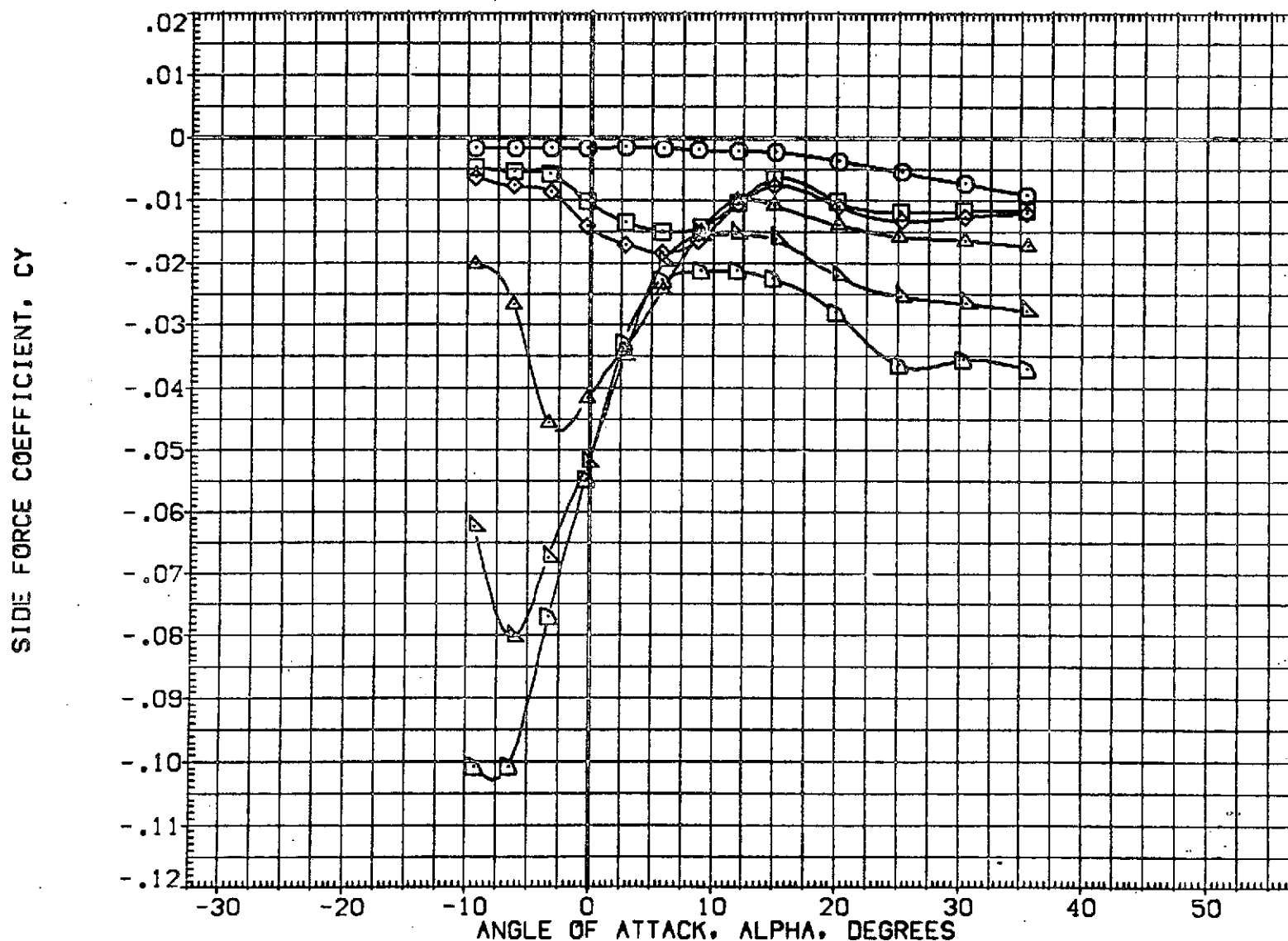


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, $Q(\text{PSF}) = 125$ ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|---------|-----------------------|
| (RHLF05) | QA82 CFHT113 MODEL 32-0 ORB V/N49 | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL038) | QA82 CFHT113 MODEL 32-0 ORB V/N52 | 125.000 | 78.000 | 82.000 | 28.500 | LREF 474.8100 IN. |
| (RHL039) | QA82 CFHT113 MODEL 32-0 ORB V/N52 | 125.000 | 98.000 | 82.000 | 36.000 | BREF 936.6800 IN. |
| (RHL040) | QA82 CFHT113 MODEL 32-0 ORB V/N52 | 125.000 | 261.000 | 79.000 | 96.000 | XMRP 1076.7000 IN. |
| (RHL041) | QA82 CFHT113 MODEL 32-0 ORB V/N52 | 125.000 | 473.000 | 83.000 | 174.000 | YMRP .0000 IN. |
| (RHL042) | QA82 CFHT113 MODEL 32-0 ORB V/N52 | 125.000 | 702.000 | 88.000 | 258.000 | ZMRP 375.0000 IN. |
| | | | | | SCALE | .0100 |

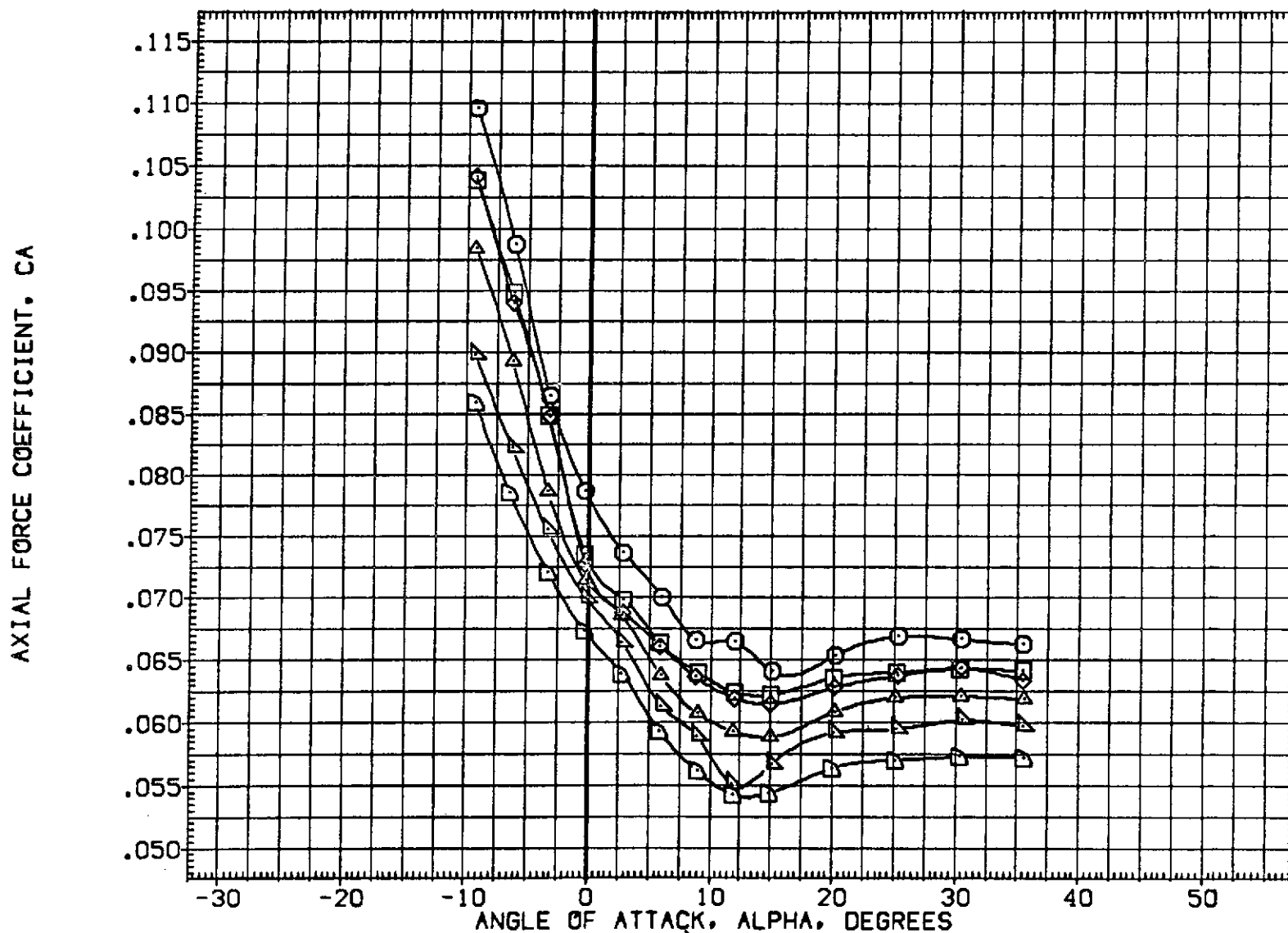


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| {CHLC38} | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | {AIR} |
| {CHLC39} | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | {AIR} |
| {CHLC40} | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | {AIR} |
| {CHLC41} | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | {AIR} |
| {CHLC42} | 0A82 CFHT113 MODEL 32-0 OR8 V/N52 | {AIR} |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|---------|
| 125.000 | 78.000 | 82.000 | 28.500 | SREF | 2680.0000 | 50. FT. |
| 125.000 | 98.000 | 82.000 | 36.000 | LREF | 474.8100 | IN. |
| 125.000 | 261.000 | 79.000 | 96.000 | BREF | 936.6800 | IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 | IN. |
| 125.000 | 702.000 | 88.000 | 258.000 | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

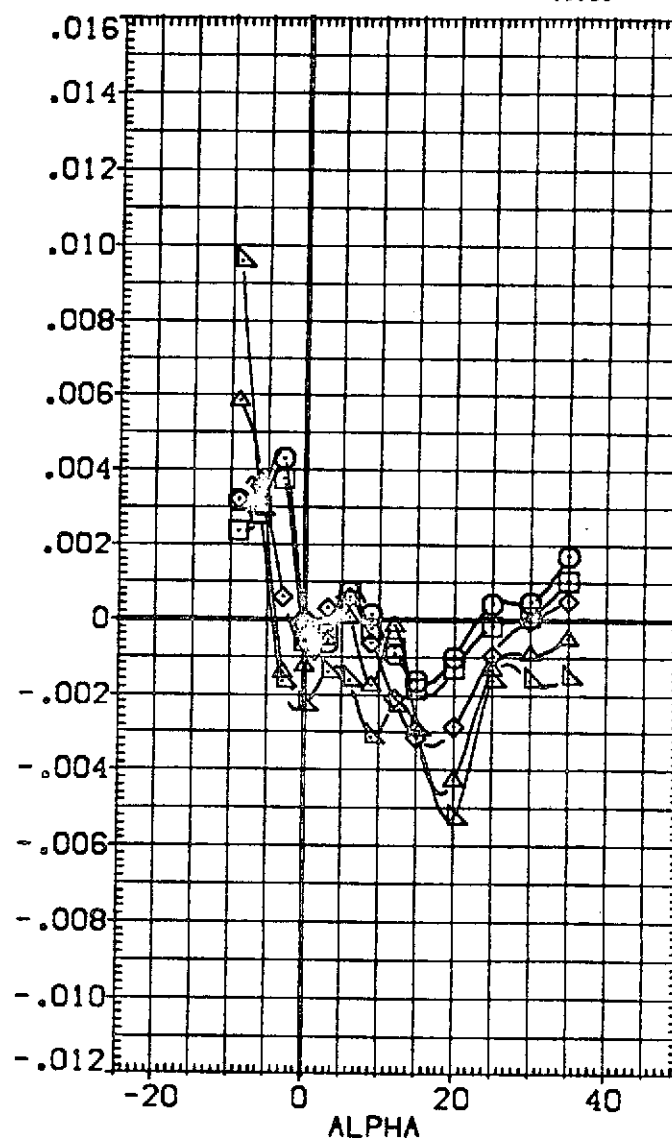
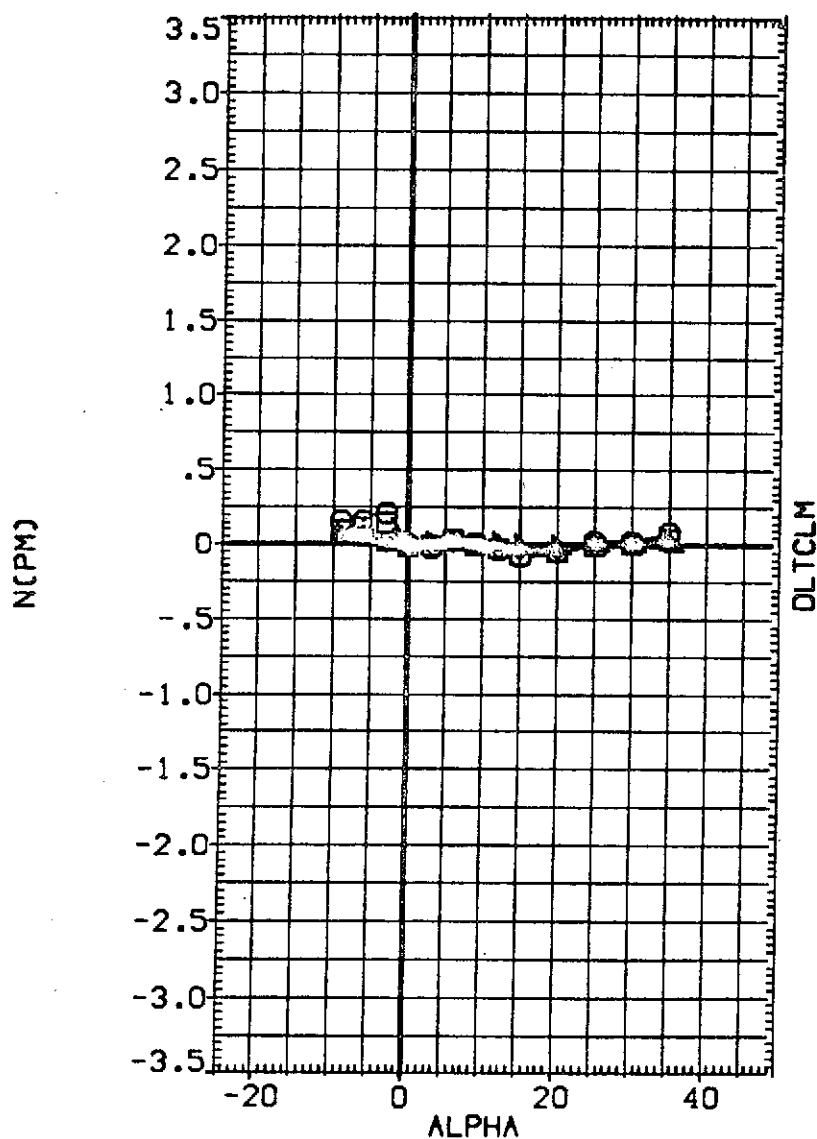


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS. Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

| | | | |
|----------|---|-----------------------------------|-------|
| (CHLC38) | ○ | 0A82 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |
| (CHLC39) | □ | 0A82 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |
| (CHLC40) | ◇ | 0A82 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |
| (CHLC41) | △ | 0A82 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |
| (CHLC42) | ▽ | 0A82 CFHT113 MODEL 32-0 ORB W/N52 | (AIR) |

| Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|---------|
| 125.000 | 78.000 | 82.000 | 28.500 | SREF | 2690.0000 | 50. FT. |
| 125.000 | 98.000 | 82.000 | 36.000 | LREF | 474.8100 | IN. |
| 125.000 | 261.000 | 79.000 | 96.000 | BREF | 936.6800 | IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 | IN. |
| 125.000 | 702.000 | 88.000 | 258.000 | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

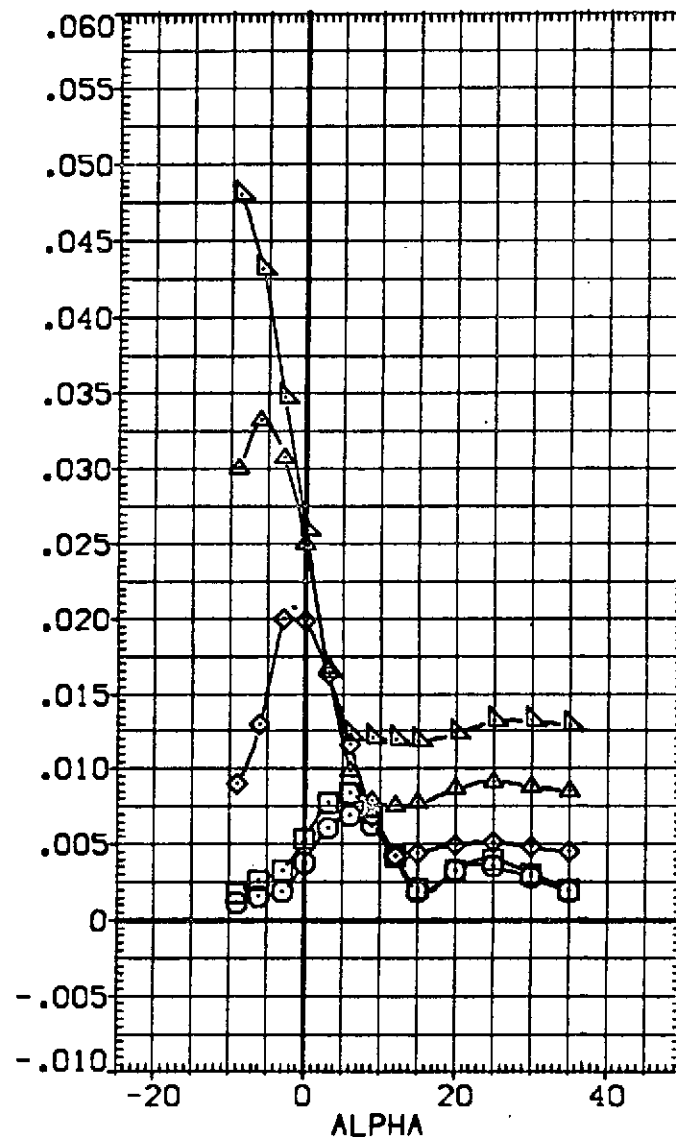
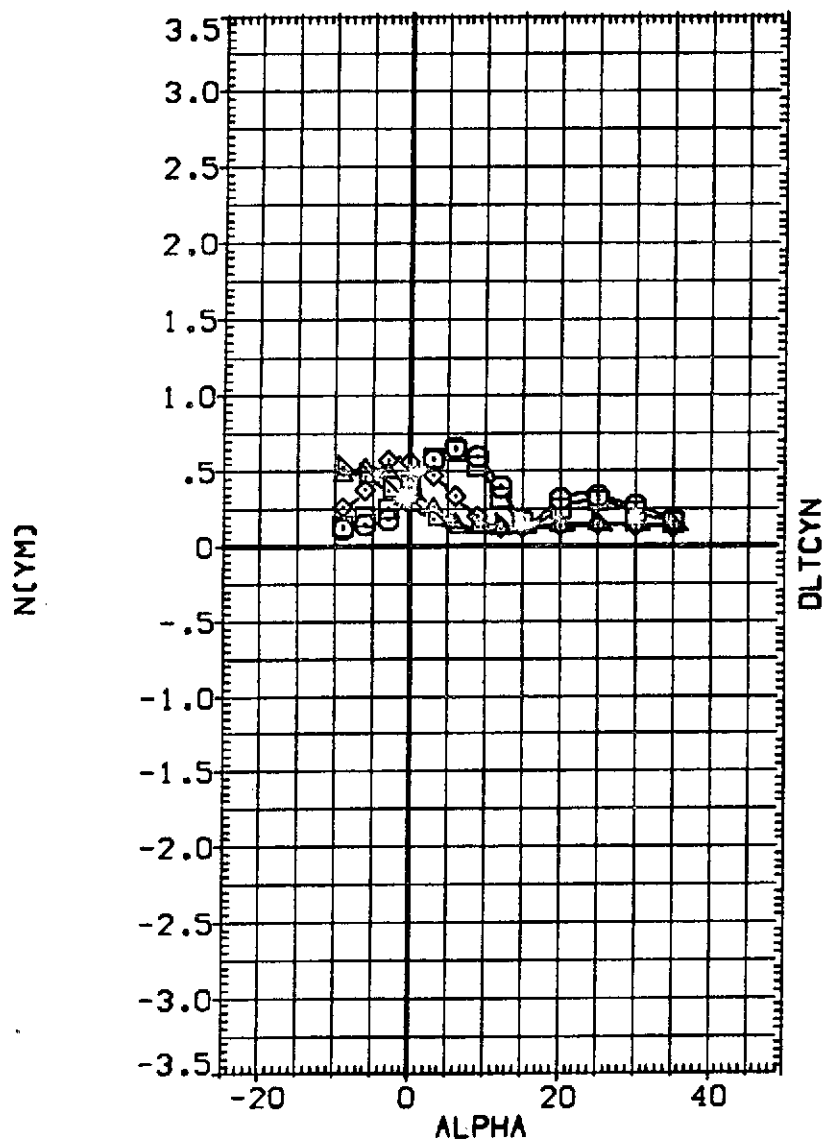


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 125 ON AERO CHARACT

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC38) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | (AIR) |
| (CHLC39) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | (AIR) |
| (CHLC40) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | (AIR) |
| (CHLC41) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | (AIR) |
| (CHLC42) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 | (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|---------|
| 125.000 | 78.000 | 82.000 | 28.500 | SREF | 2690.0000 | 50. FT. |
| 125.000 | 98.000 | 82.000 | 35.000 | LREF | 474.8100 | IN. |
| 125.000 | 261.000 | 79.000 | 95.000 | BREF | 935.6800 | IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 | IN. |
| 125.000 | 702.000 | 88.000 | 258.000 | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

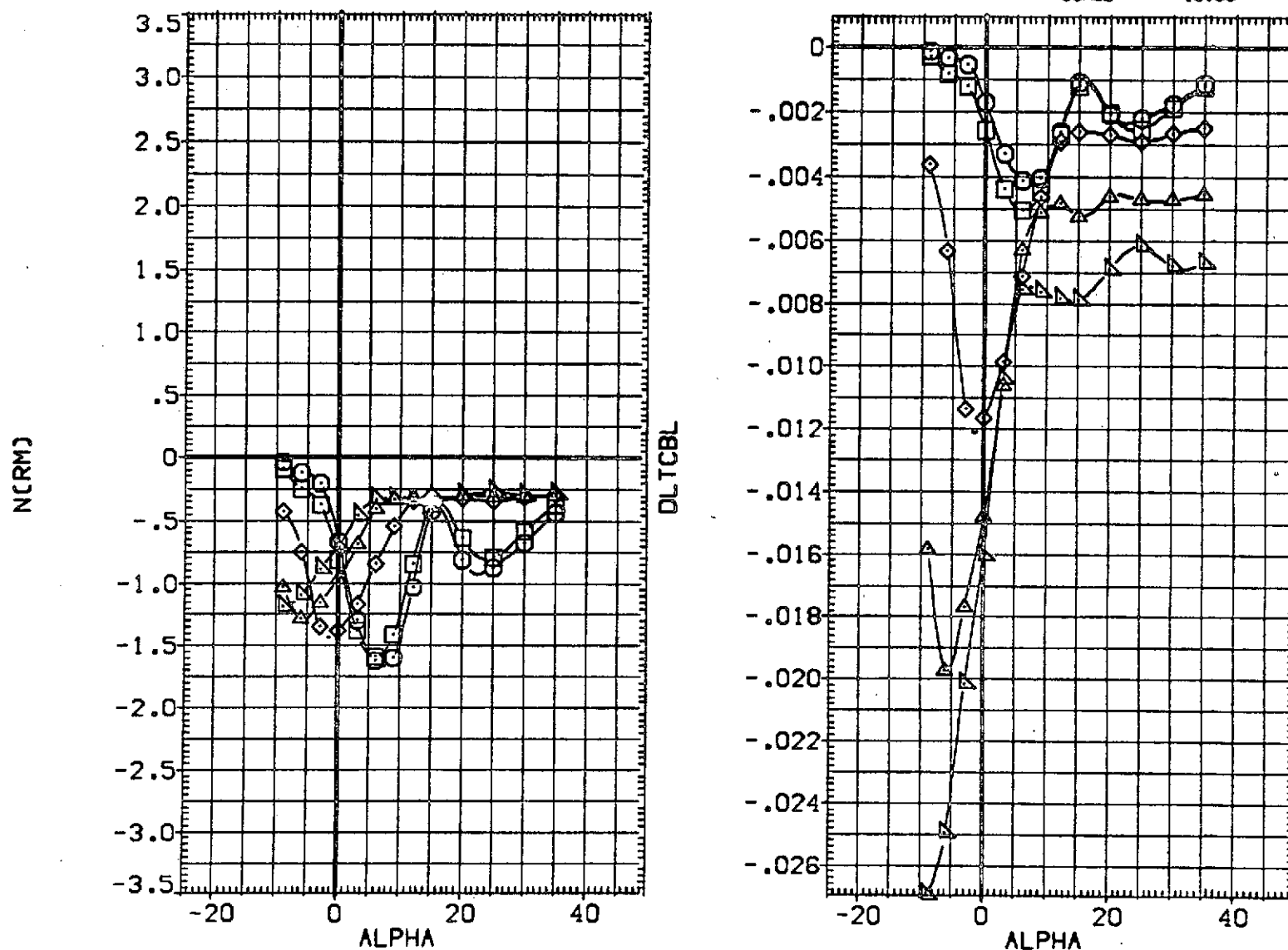


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC38) | DA82 CFHT113 MODEL 32-0 OR8 V/N52 (AIR) |
| (CHLC39) | DA82 CFHT113 MODEL 32-0 OR8 V/N52 (AIR) |
| (CHLC40) | DA82 CFHT113 MODEL 32-0 OR8 V/N52 (AIR) |
| (CHLC41) | DA82 CFHT113 MODEL 32-0 OR8 V/N52 (AIR) |
| (CHLC42) | DA82 CFHT113 MODEL 32-0 OR8 V/N52 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 78.000 | 82.000 | 28.500 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 98.000 | 82.000 | 36.000 | LREF | 474.8100 IN. |
| 125.000 | 261.000 | 79.000 | 86.000 | BREF | 933.6800 IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 IN. |
| 125.000 | 702.000 | 88.000 | 258.000 | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

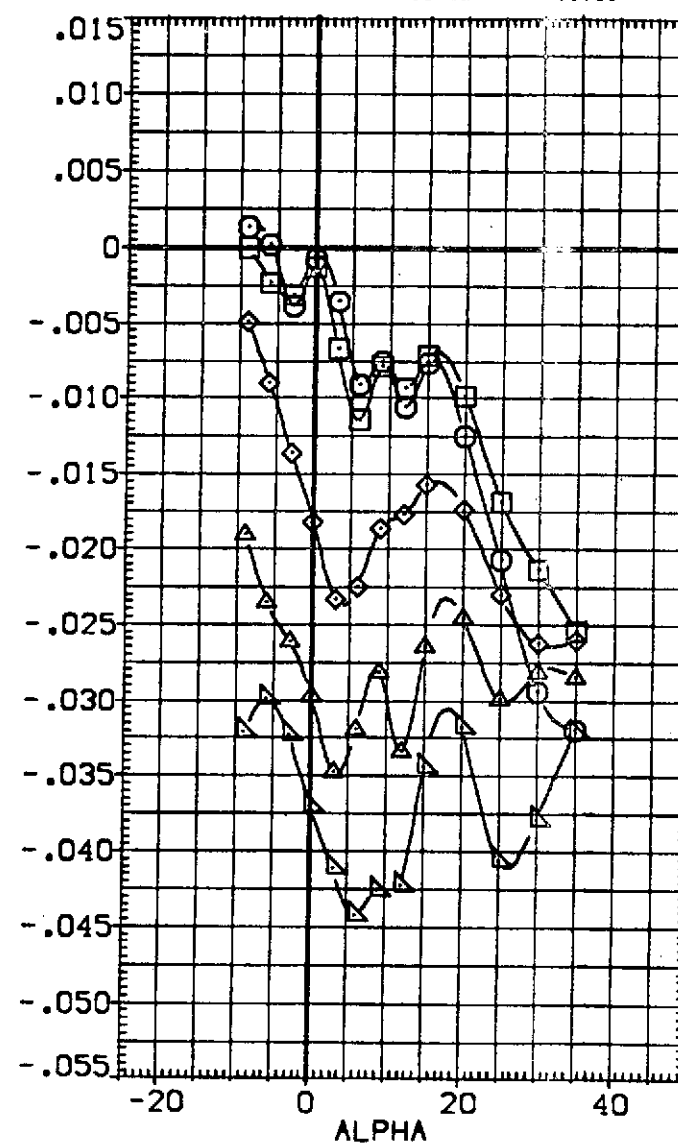
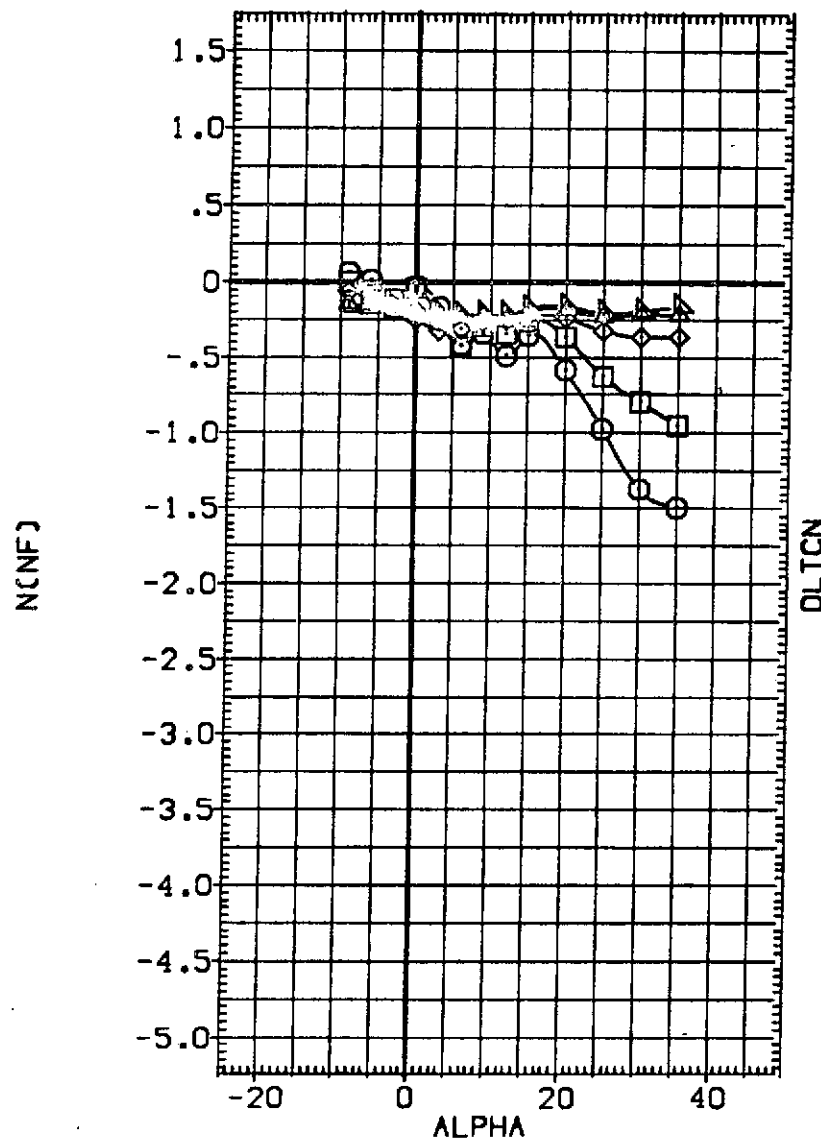


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC38] | GA82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC39] | GA82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC40] | GA82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC41] | GA82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |
| [CHLC42] | GA82 CFHT113 MODEL 32-0 ORB V/N52 [AIR] |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 78.000 | 82.000 | 28.500 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 98.000 | 82.000 | 36.000 | LREF | 474.8100 IN. |
| 125.000 | 261.000 | 79.000 | 96.000 | BREF | 936.6800 IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 IN. |
| 125.000 | 702.000 | 88.000 | 258.000 | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

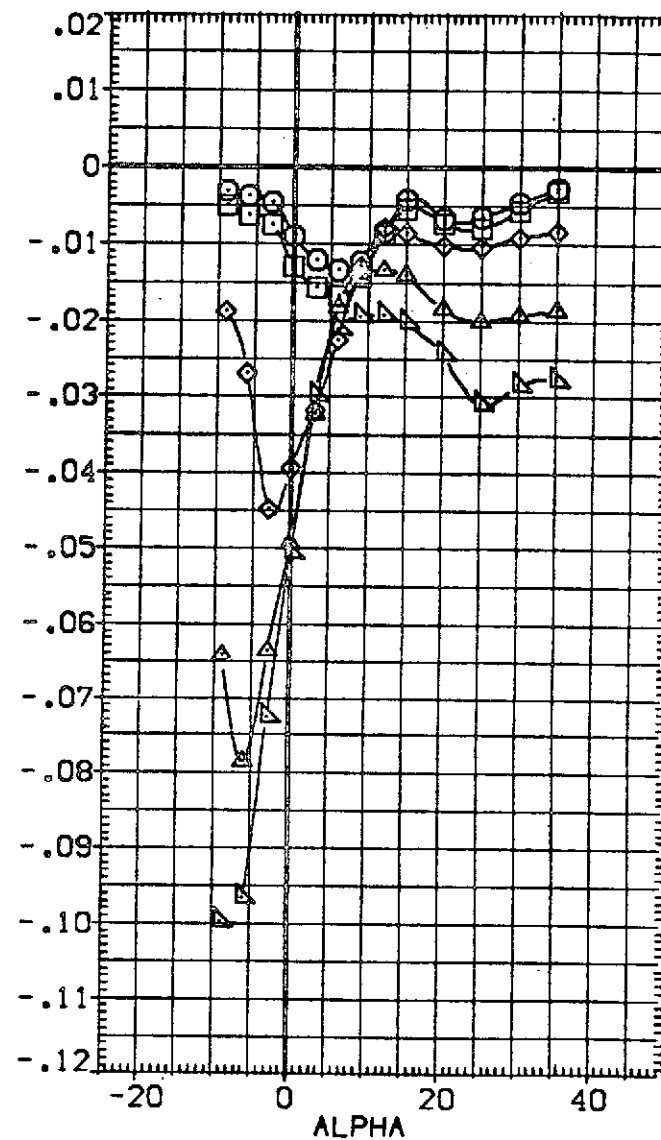
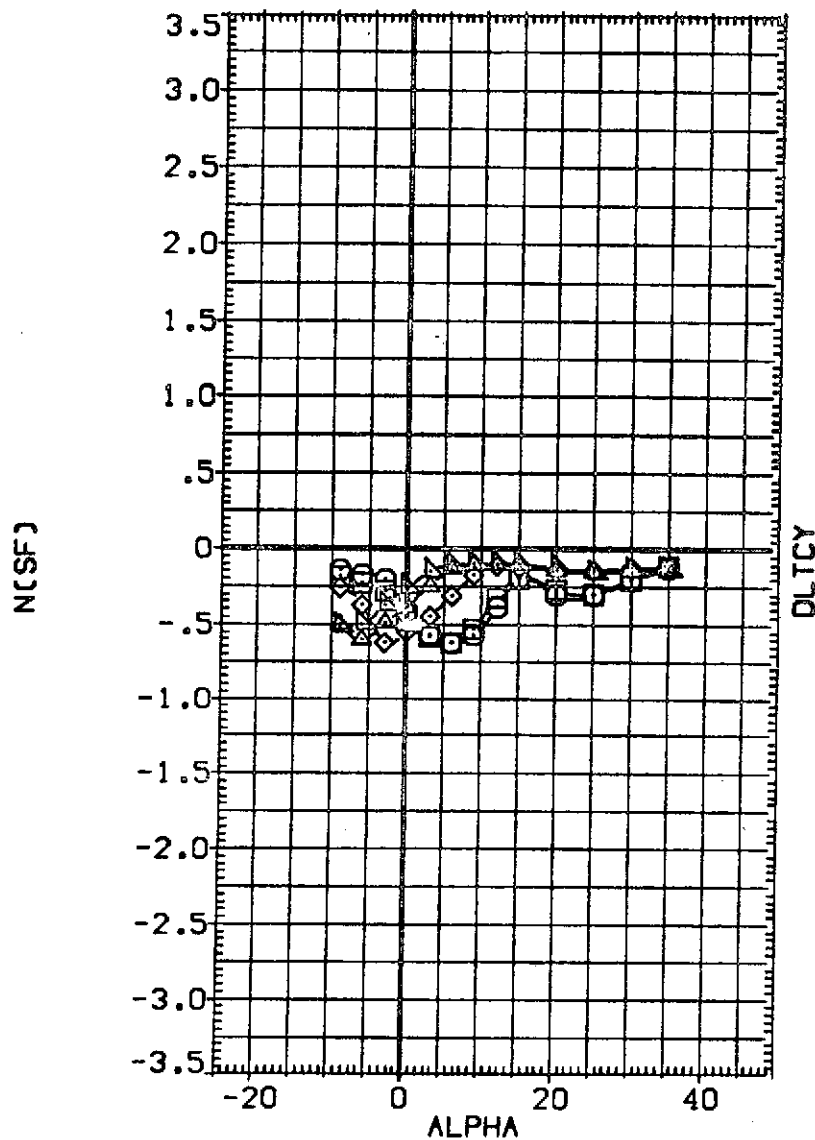


FIG. 25 EFFECT OF T/QA USING AIR WITH N52 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|---------|-----------------------|------------------|
| (RHL05) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | 98.000 | 85.000 | 36.000 | SREF | 2690.0000 SQ.FT. |
| (RHL054) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 98.000 | 85.000 | 36.000 | LREF | 474.8100 IN. |
| (RHL055) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 25.000 | 261.000 | 80.000 | 96.000 | BREF | 936.6800 IN. |
| (RHL056) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 25.000 | 473.000 | 80.000 | 174.000 | XMRP | 1076.7000 IN. |
| (RHL057) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 25.000 | 702.000 | 84.000 | 258.000 | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

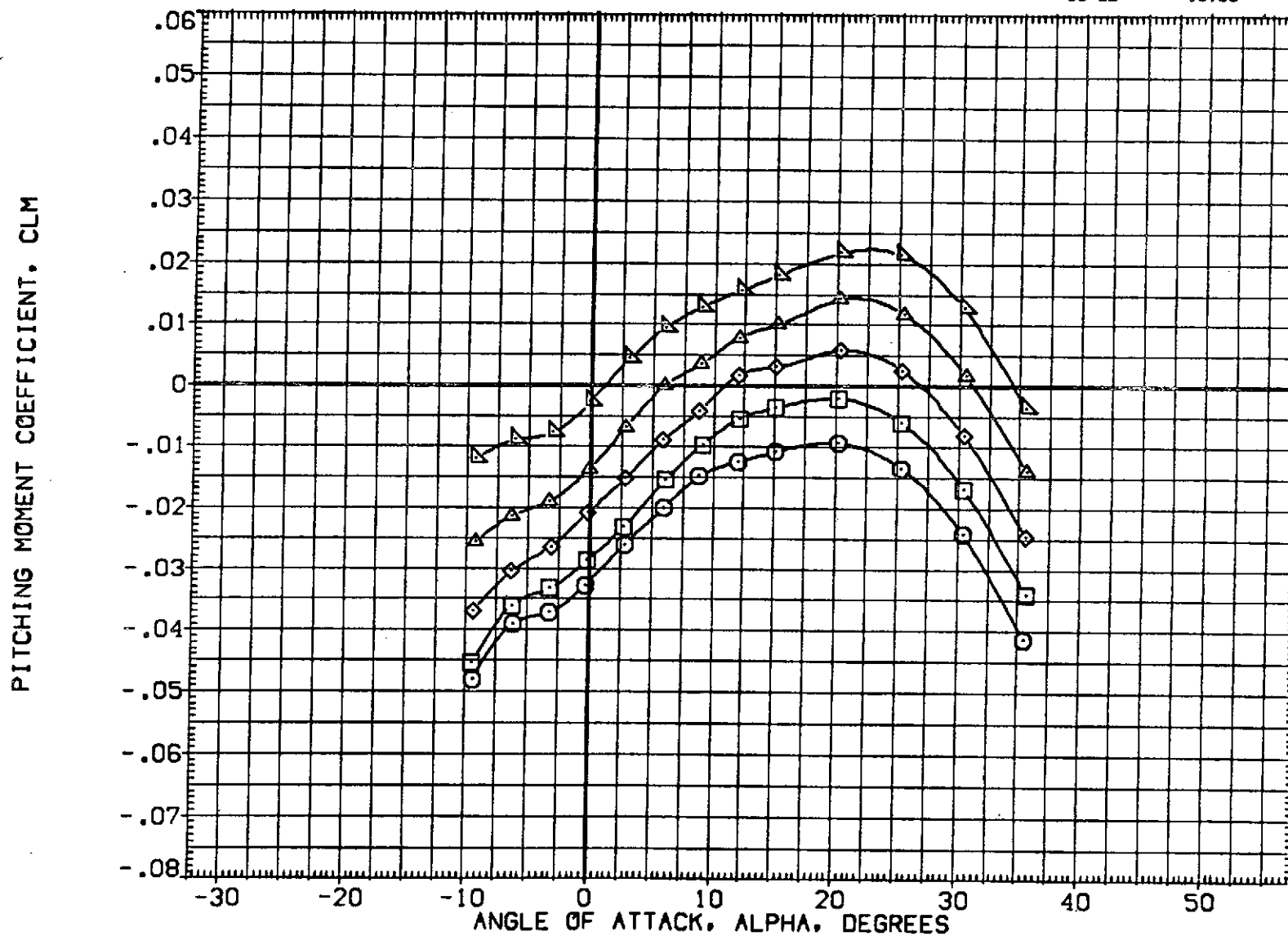


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | FORCS | TORCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (R105) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | | SREF 2690.0000 SQ.FT. |
| (R1054) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 96.000 | 95.000 | 36.000 | LREF 474.8100 IN. |
| (R1055) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 261.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| (R1056) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 473.000 | 80.000 | 174.000 | XMRP 1076.7000 IN. |
| (R1057) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 702.000 | 84.000 | 256.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

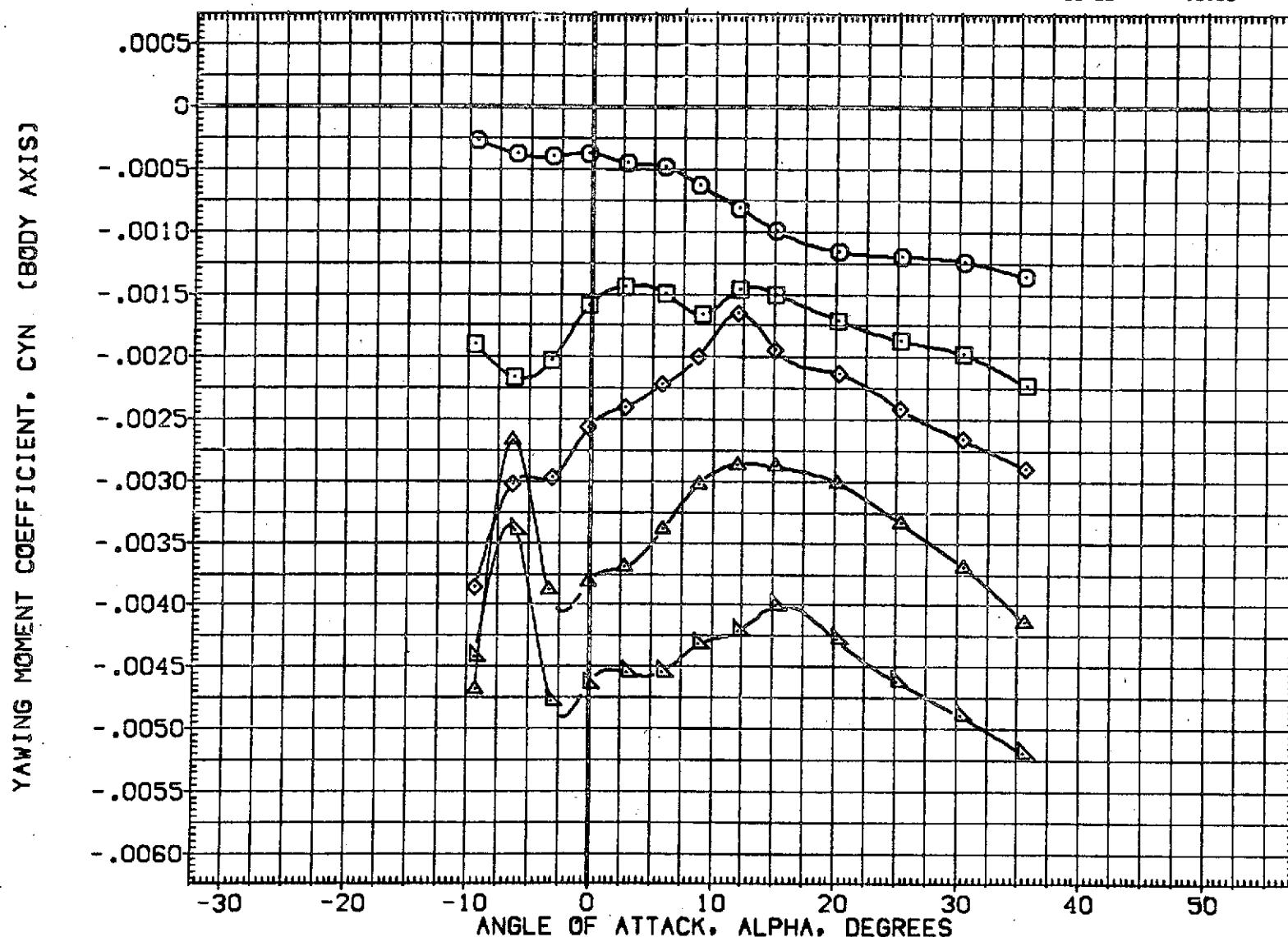


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|---------|-----------------------|------------------|
| (ZLF05) | QAB2 CFHT113 MODEL 32-0 CR8 V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FY. |
| (ZLF054) | QAB2 CFHT113 MODEL 32-0 CR8 V/N79 (AIR) | 125.000 | 98.000 | 85.000 | 36.000 | LREF | 474.8100 IN. |
| (ZLF055) | QAB2 CFHT113 MODEL 32-0 CR8 V/N79 (AIR) | 125.000 | 261.000 | 90.000 | 96.000 | BREF | 936.6800 IN. |
| (ZLF056) | QAB2 CFHT113 MODEL 32-0 CR8 V/N79 (AIR) | 125.000 | 473.000 | 80.000 | 174.000 | XMRF | 1076.7000 IN. |
| (ZLF057) | QAB2 CFHT113 MODEL 32-0 CR8 V/N79 (AIR) | 125.000 | 702.000 | 84.000 | 258.000 | YMRF | .0000 IN. |
| | | | | | | ZMRF | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

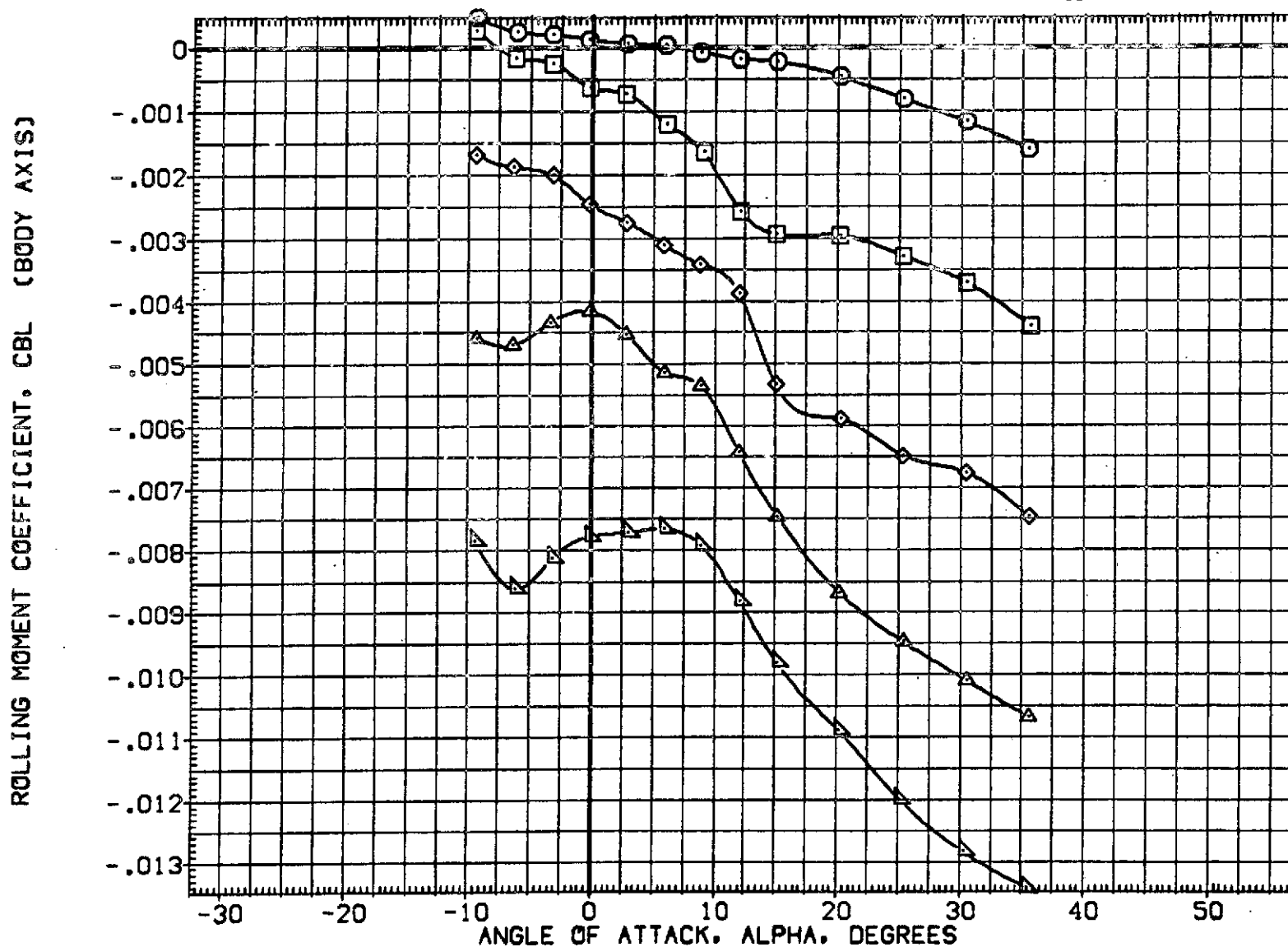


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHL05) | QAB2 CFHT113 MODEL 32-0 GRB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL054) | QAB2 CFHT113 MODEL 32-0 GRB V/N79 (AIR) | 125.000 | 98.000 | 65.000 | 36.000 | LREF 474.8100 IN. |
| (RHL055) | QAB2 CFHT113 MODEL 32-0 GRB V/N79 (AIR) | 125.000 | 261.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| (RHL056) | QAB2 CFHT113 MODEL 32-0 GRB V/N79 (AIR) | 125.000 | 473.000 | 80.000 | 174.000 | XMRP 1076.7000 IN. |
| (RHL057) | QAB2 CFHT113 MODEL 32-0 GRB V/N79 (AIR) | 125.000 | 702.000 | 94.000 | 258.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

NORMAL FORCE COEFFICIENT, CN

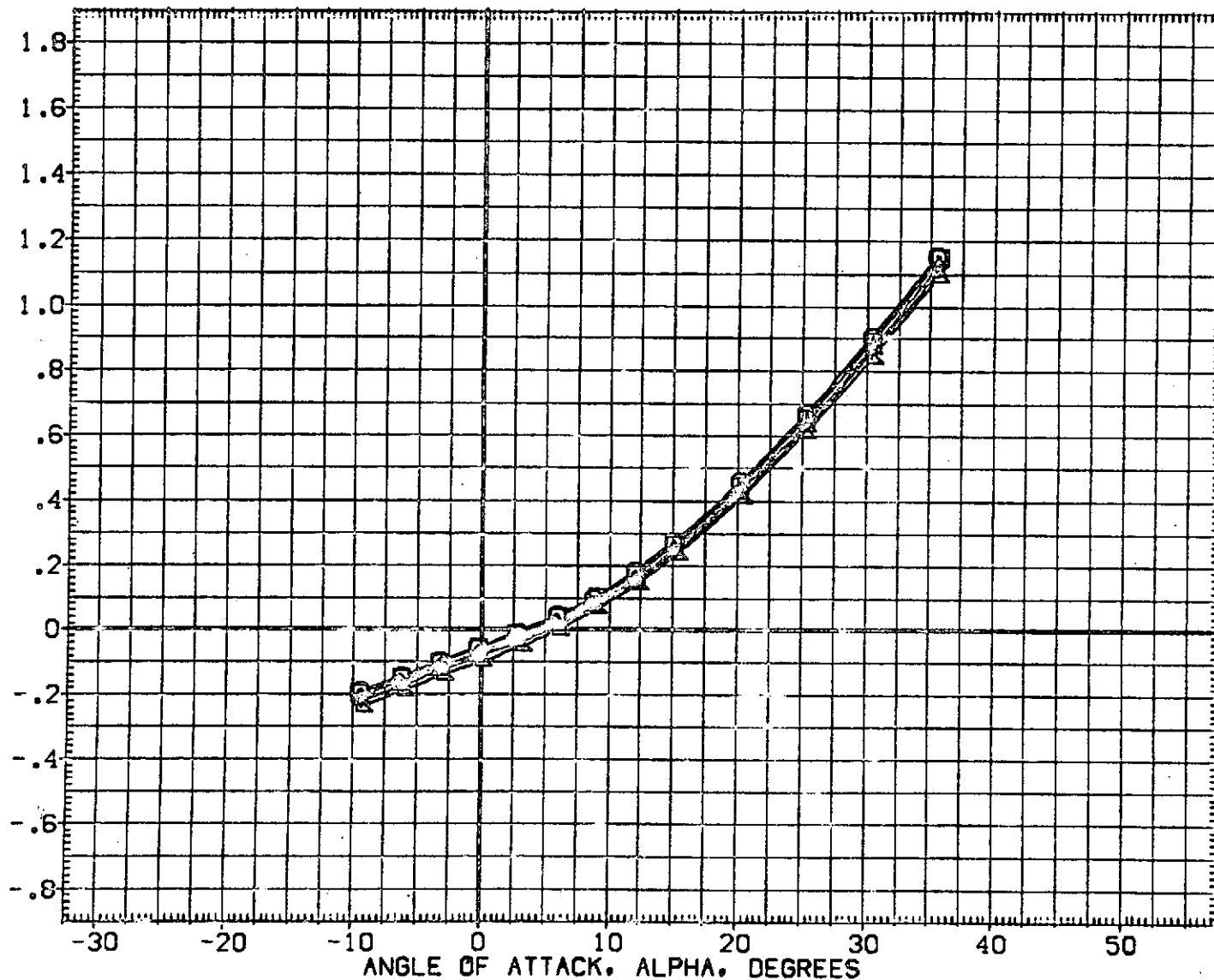


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|---------|-----------------------|------------------|
| (RHL053) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL054) | 0A82 CFHT113 MODEL 32-0 ORB V/N79 [AIR] | 125.000 | 98.000 | 85.000 | 36.000 | LREF | 474.8100 IN. |
| (RHL055) | 0A82 CFHT113 MODEL 32-0 ORB V/N79 [AIR] | 125.000 | 261.000 | 80.000 | 96.000 | BREF | 936.6800 IN. |
| (RHL056) | 0A82 CFHT113 MODEL 32-0 ORB V/N79 [AIR] | 125.000 | 473.000 | 80.000 | 174.000 | XMRP | 1076.7000 IN. |
| (RHL057) | 0A82 CFHT113 MODEL 32-0 ORB V/N79 [AIR] | 125.000 | 702.000 | 84.000 | 258.000 | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

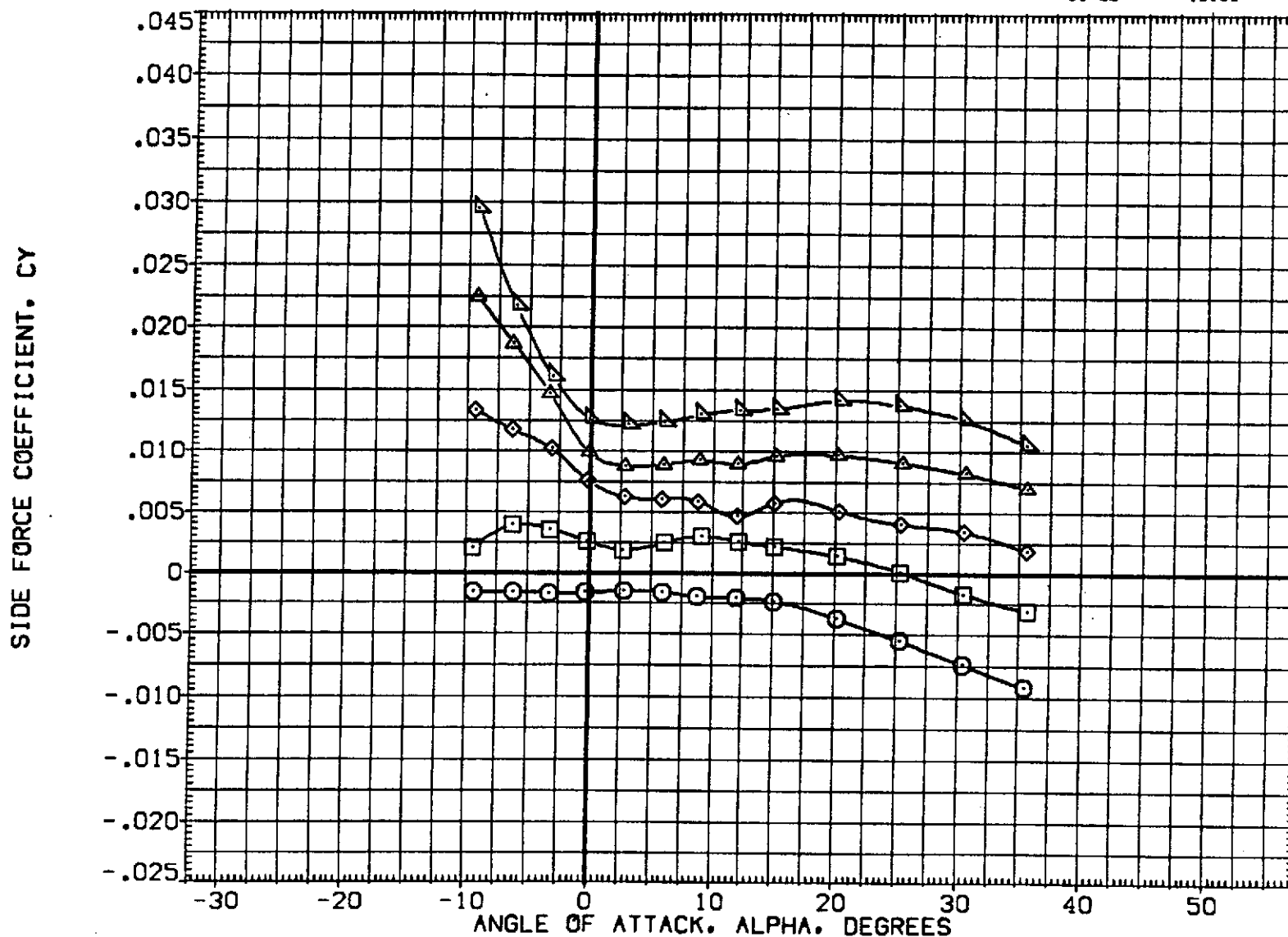


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| 22L F05 | GA82 CFHT113 MODEL 32-0 ORB V/N48 RCS OFF | 125.000 | 98.000 | 85.000 | 36.000 | BREF 2690.0000 SQ.FT. |
| 22L F054 | GA82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 98.000 | 85.000 | 36.000 | LREF 474.8100 IN. |
| 22L F055 | GA82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 261.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| 22L F056 | GA82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 473.000 | 80.000 | 174.000 | XMRP 1076.7000 IN. |
| 22L F057 | GA82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) | 125.000 | 702.000 | 84.000 | 256.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

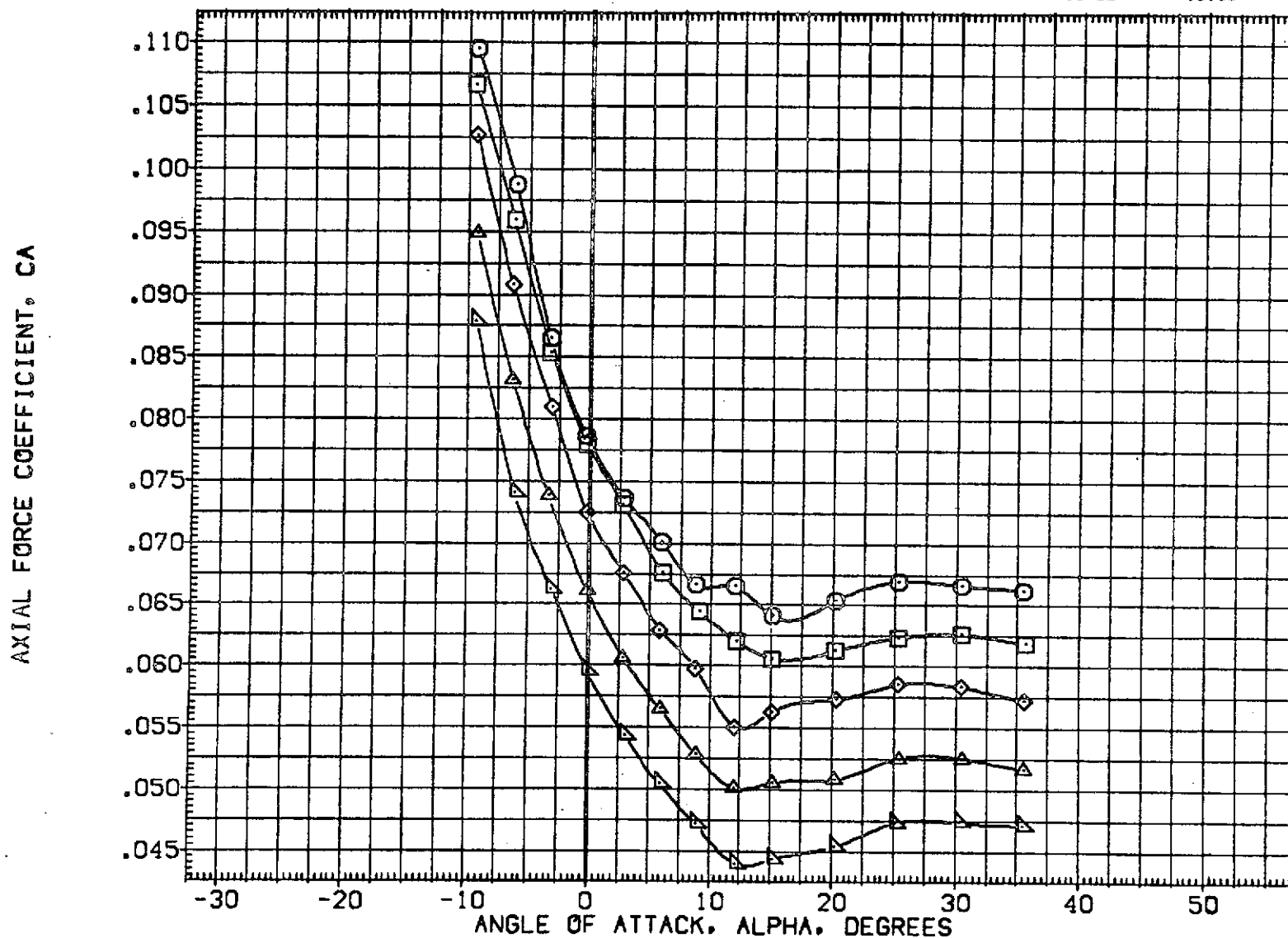


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC54] ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| [CHLC55] ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| [CHLC56] ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| [CHLC57] △ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 125.000 | 98.000 | 85.000 | 36.000 | SREF | 2690.0000 | 50.FT. |
| 125.000 | 261.000 | 80.000 | 93.000 | LREF | 474.8100 | IN. |
| 125.000 | 473.000 | 80.000 | 174.000 | BREF | 936.6800 | IN. |
| 125.000 | 702.000 | 84.000 | 259.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

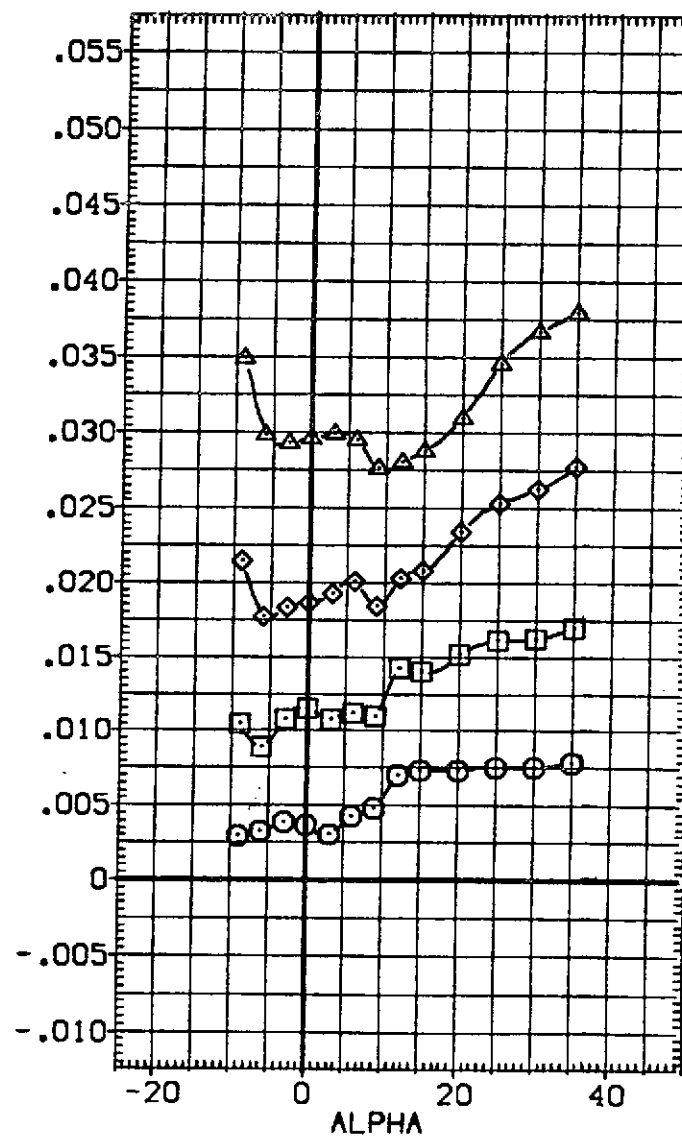
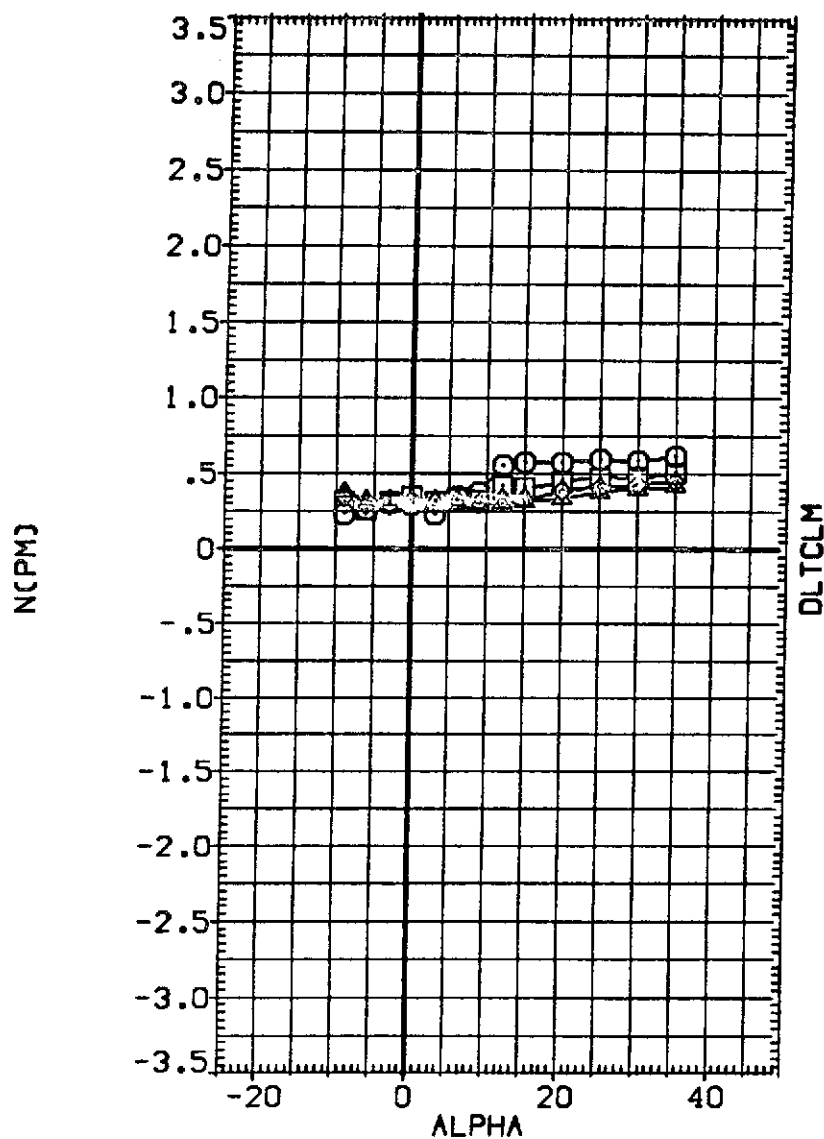


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

| | | | |
|----------|---|-----------------------------------|-------|
| {CHLC54} | ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 | [AIR] |
| {CHLC55} | □ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 | [AIR] |
| {CHLC56} | ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 | [AIR] |
| {CHLC57} | △ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 | [AIR] |

| Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 98.000 | 85.000 | 38.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 473.000 | 80.000 | 174.000 | BREF | 936.6800 IN. |
| 125.000 | 702.000 | 84.000 | 258.000 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

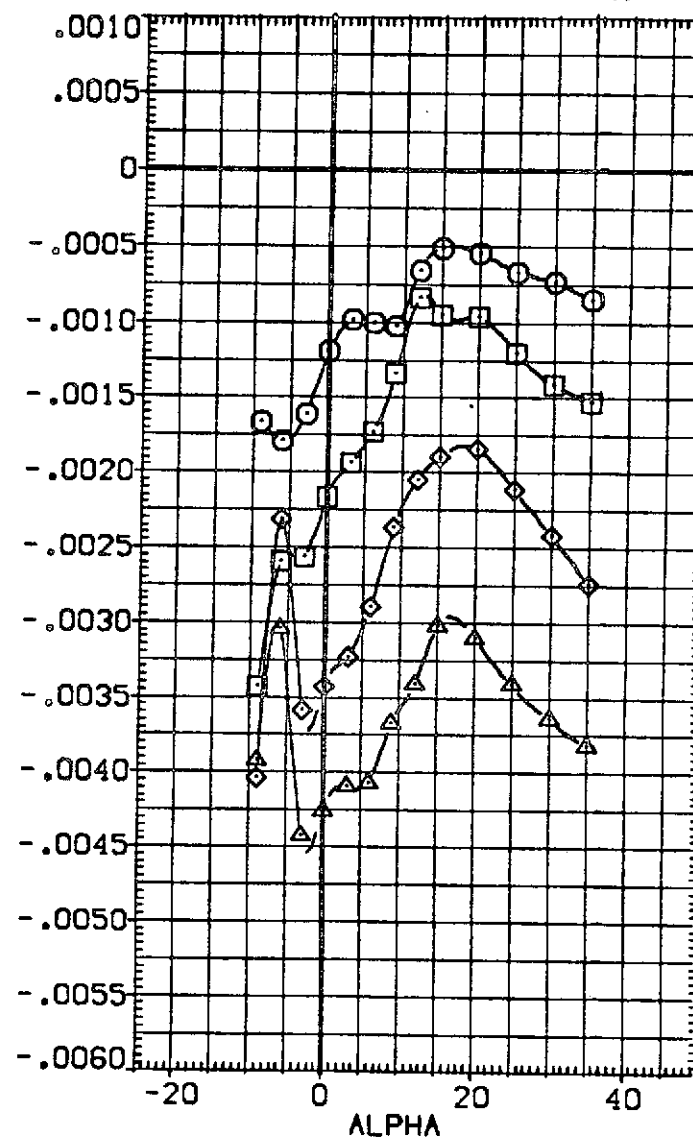
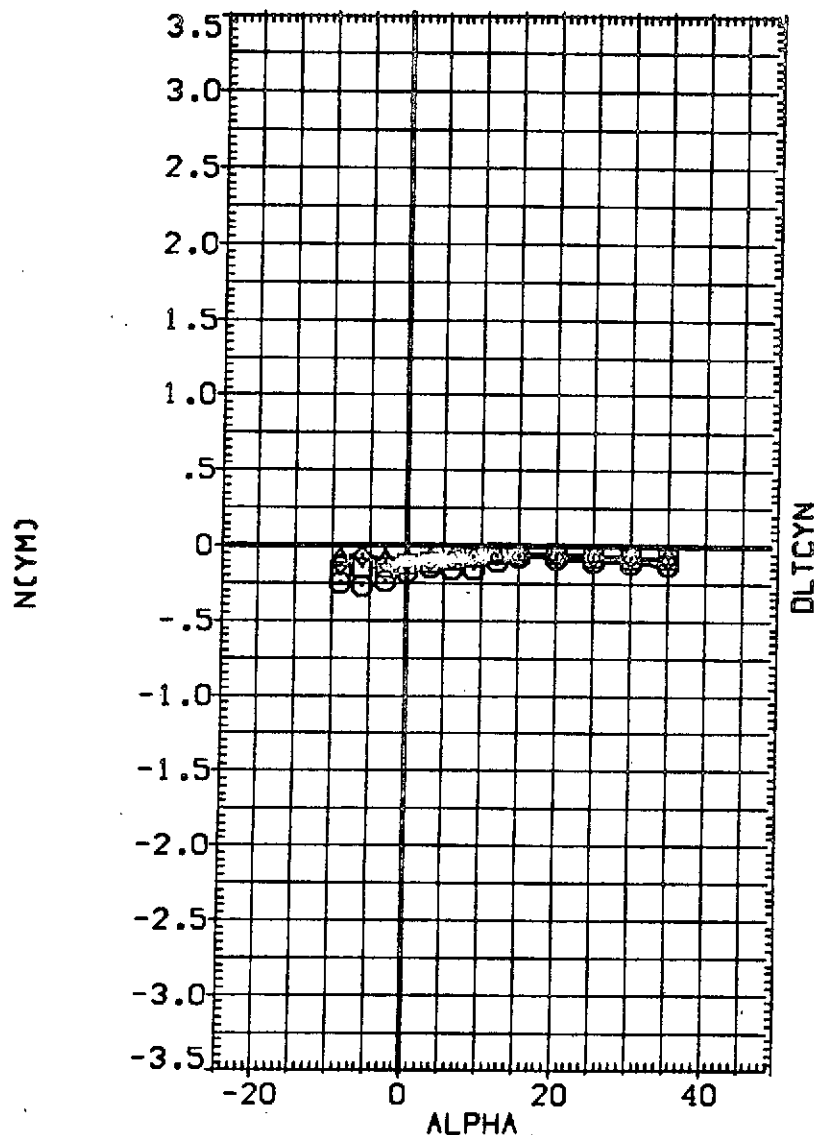


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC54) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| (CHLC55) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| (CHLC56) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| (CHLC57) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 59.000 | 65.000 | 36.000 | SREF | 2680.0000 SQ.FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 473.000 | 80.000 | 174.000 | BREF | 936.6800 IN. |
| 125.000 | 702.000 | 84.000 | 258.000 | XMRP | 1075.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

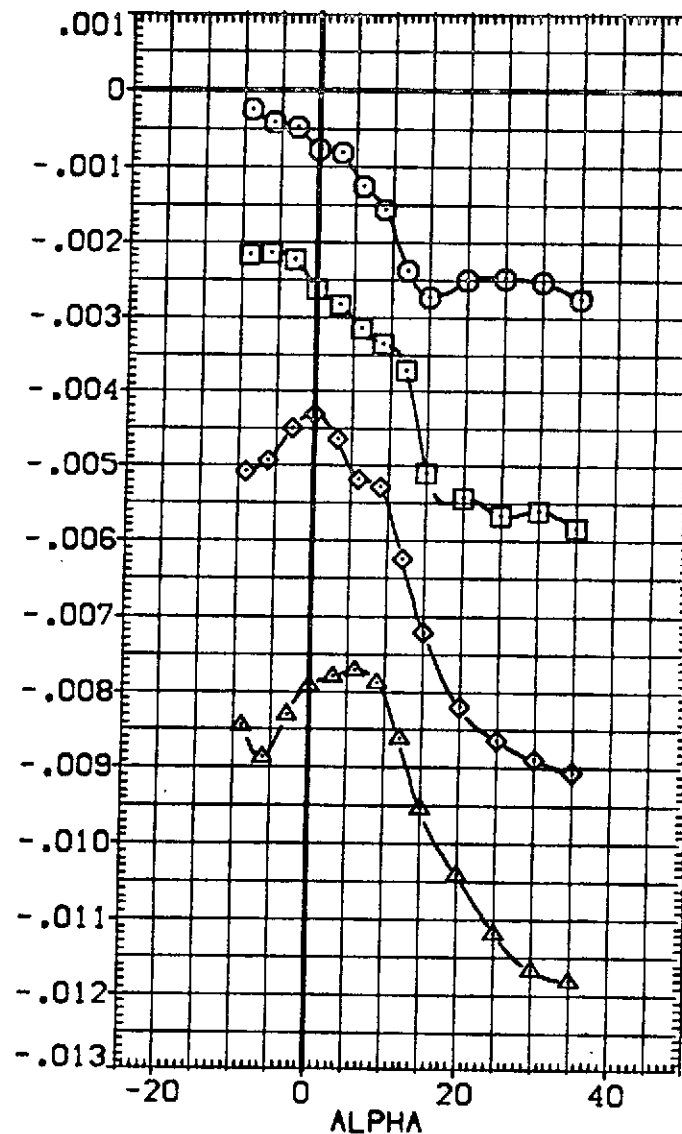
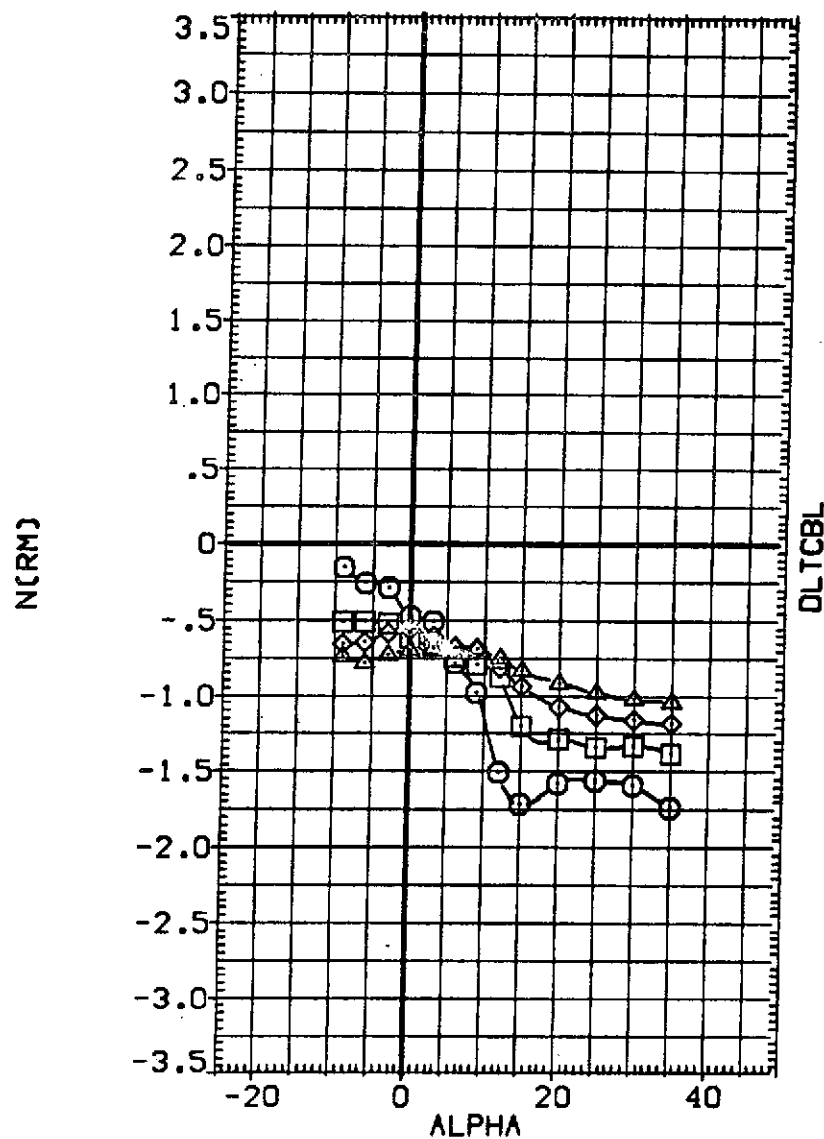


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLCS4) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| (CHLCS5) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| (CHLCS6) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |
| (CHLCS7) | QAB2 CFHT113 MODEL 32-0 ORB V/N79 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|---------|-----------------------|
| 125.000 | 98.000 | 65.000 | 36.000 | SREF 2690.0000 SQ.FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF 474.8100 IN. |
| 125.000 | 473.000 | 80.000 | 174.000 | BREF 936.6800 IN. |
| 125.000 | 702.000 | 84.000 | 258.000 | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

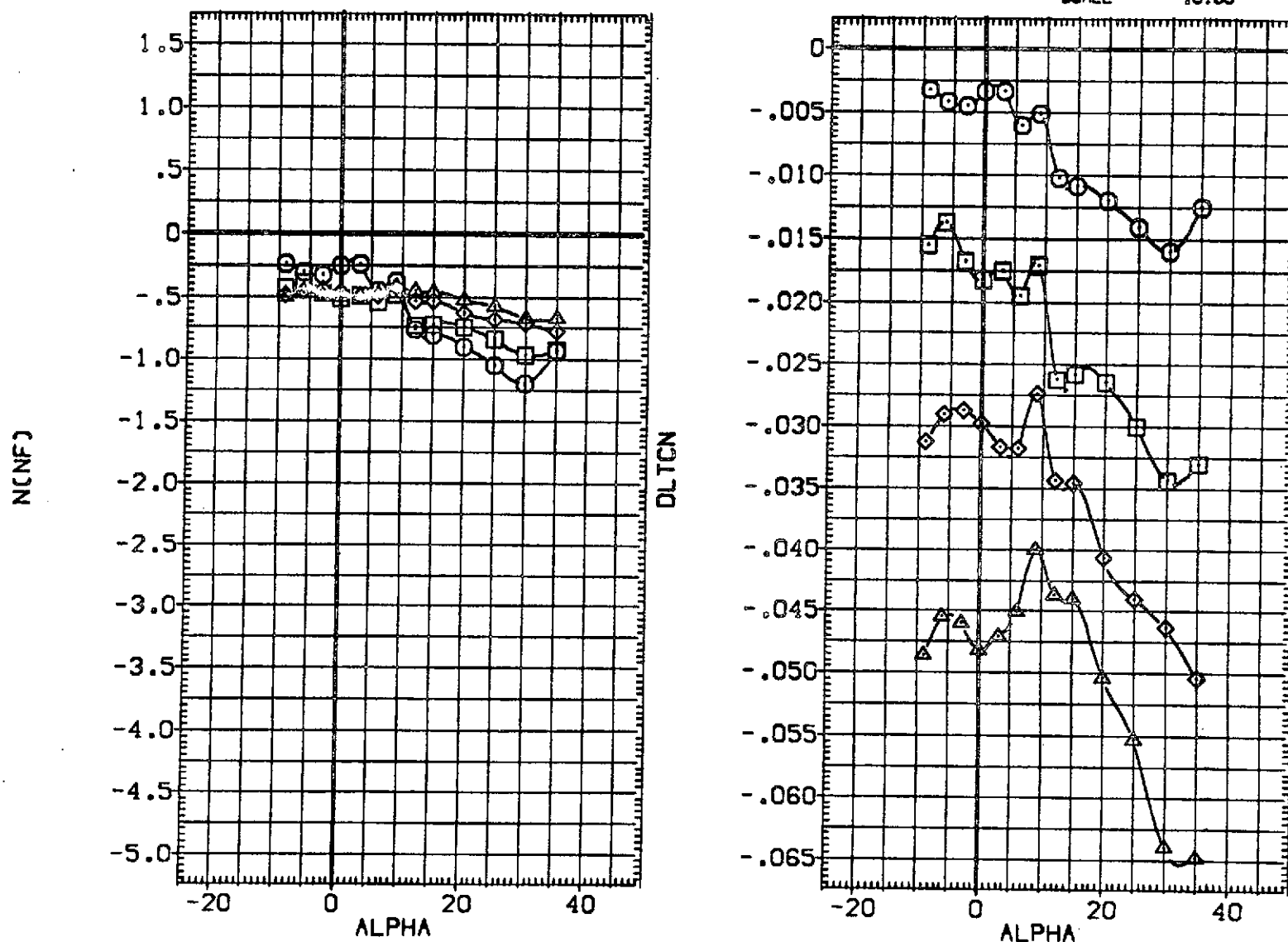


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC54] □ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 [AIR] |
| [CHLC55] □ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 [AIR] |
| [CHLC56] ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 [AIR] |
| [CHLC57] △ | 0A82 CFHT113 MODEL 32-0 ORB V/N79 [AIR] |

| Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 96.000 | 85.000 | 33.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 473.000 | 80.000 | 174.000 | BREF | 936.8800 IN. |
| 125.000 | 702.000 | 84.000 | 258.000 | XMRF | 1076.7000 IN. |
| | | | | YMRF | .0000 IN. |
| | | | | ZMRF | 375.0000 IN. |
| | | | | SCALE | .0100 |

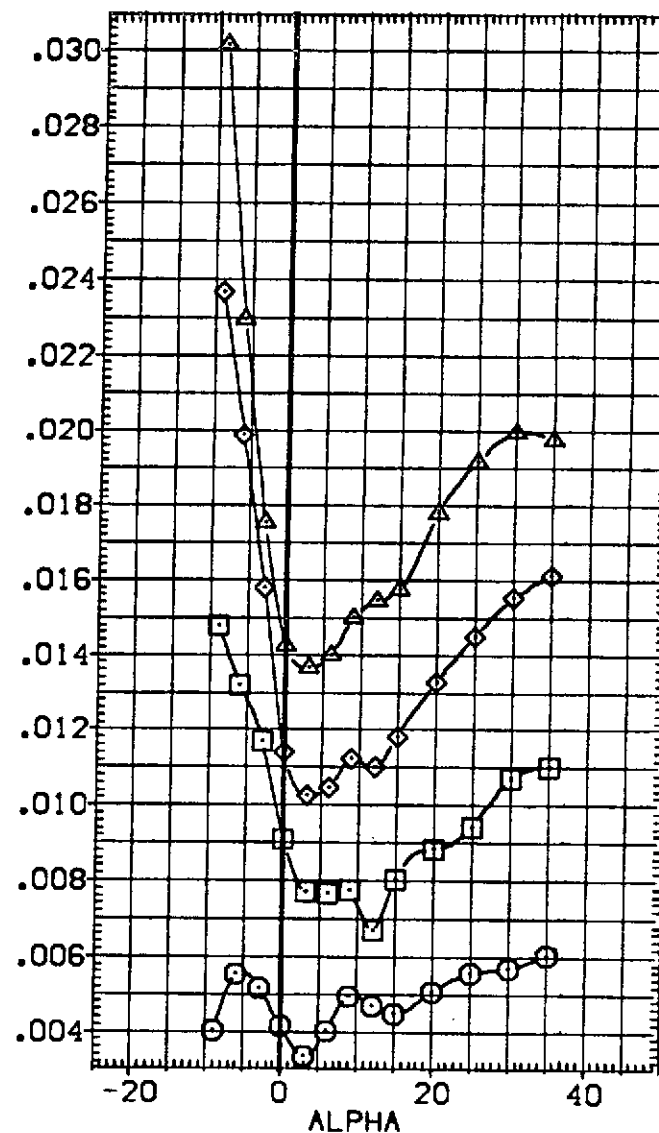
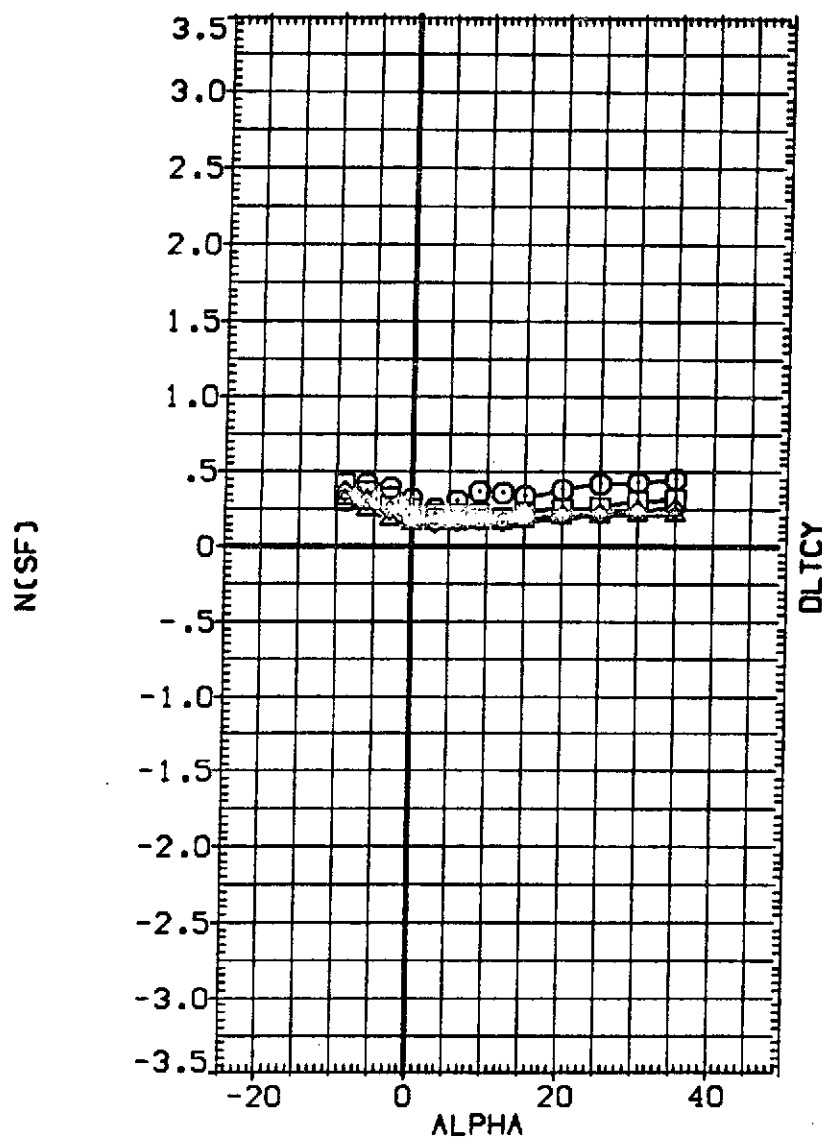


FIG. 26 EFFECT OF T/QA USING AIR WITH N79 JETS, $Q(\text{PSF}) = 125$ ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|---------|-----------------------|
| [RHLF05] | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | 125.000 | 100.000 | 79.000 | 36.000 | SREF 2690.0000 50.FT. |
| [RHL056] | QAB2 CFHT113 MODEL 32-0 ORB V/N83 | 125.000 | 100.000 | 79.000 | 36.000 | LREF 474.8100 IN. |
| [RHL059] | QAB2 CFHT113 MODEL 32-0 ORB V/N83 | 125.000 | 266.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| [RHL060] | QAB2 CFHT113 MODEL 32-0 ORB V/N83 | 125.000 | 482.000 | 84.000 | 174.000 | XMRP 1076.7000 IN. |
| [RHL061] | QAB2 CFHT113 MODEL 32-0 ORB V/N83 | 125.000 | 652.000 | 87.000 | 236.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

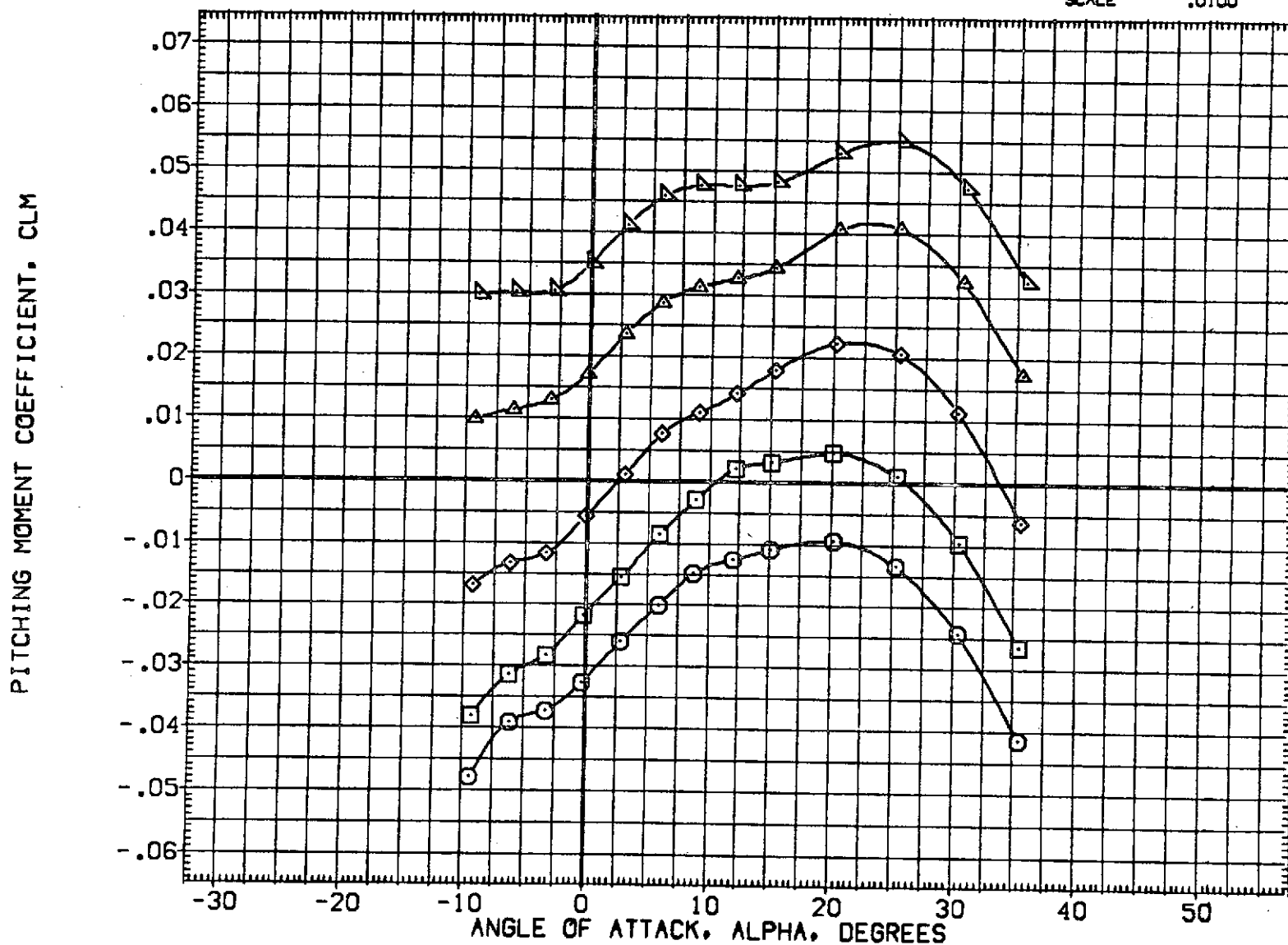


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | FORCS | TCRCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| [RHLF05] | QA82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | 100.000 | 79.000 | 36.000 | SREF 2690.0000 80.FT. |
| [RHL058] | QA82 CFHT113 MODEL 32-0 ORB V/N83 [AIR] | 125.000 | 266.000 | 80.000 | 96.000 | LREF 474.8100 IN. |
| [RHL059] | QA82 CFHT113 MODEL 32-0 ORB V/N83 [AIR] | 125.000 | 482.000 | 84.000 | 174.000 | BREF 938.6800 IN. |
| [RHL060] | QA82 CFHT113 MODEL 32-0 ORB V/N83 [AIR] | 125.000 | 652.000 | 97.000 | 235.000 | XMRP 1076.7000 IN. |
| [RHL061] | QA82 CFHT113 MODEL 32-0 ORB V/N83 [AIR] | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

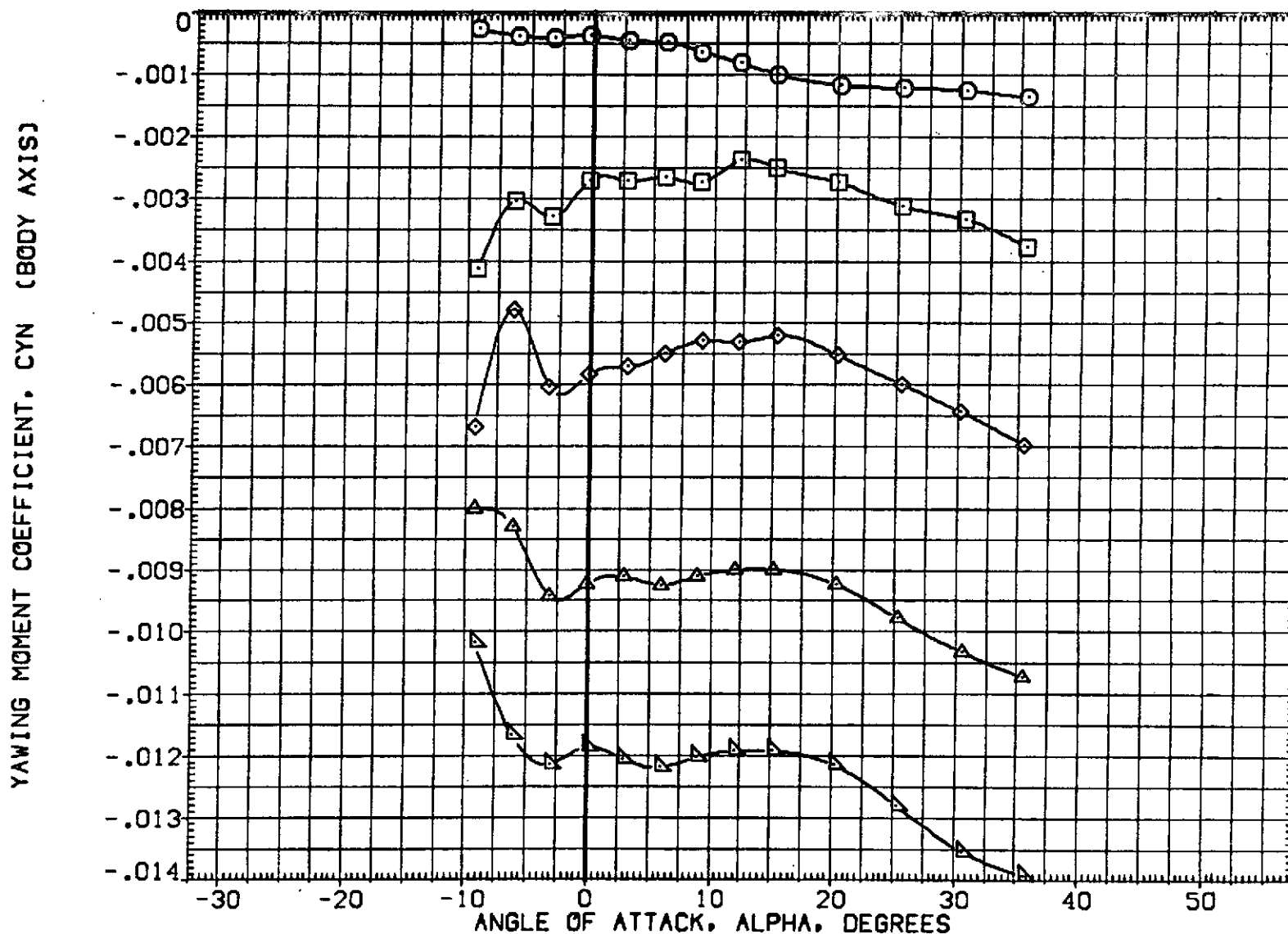


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (R4LF05) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | 100.000 | 79.000 | 36.000 | SREF 2690.0000 SO.FT. |
| (R4LF058) | QAB2 CFHT113 MODEL 32-0 ORB V/N83 [AIR] | 125.000 | 100.000 | 79.000 | 36.000 | LREF 474.8100 IN. |
| (R4LF059) | QAB2 CFHT113 MODEL 32-0 ORB V/N83 [AIR] | 125.000 | 266.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| (R4LF060) | QAB2 CFHT113 MODEL 32-0 ORB V/N83 [AIR] | 125.000 | 482.000 | 84.000 | 174.000 | XMRF 1076.7000 IN. |
| (R4LF061) | QAB2 CFHT113 MODEL 32-0 ORB V/N83 [AIR] | 125.000 | 652.000 | 87.000 | 236.000 | YMRF .0000 IN. |
| | | | | | | ZMRF 375.0000 IN. |
| | | | | | | SCALE .0100 |

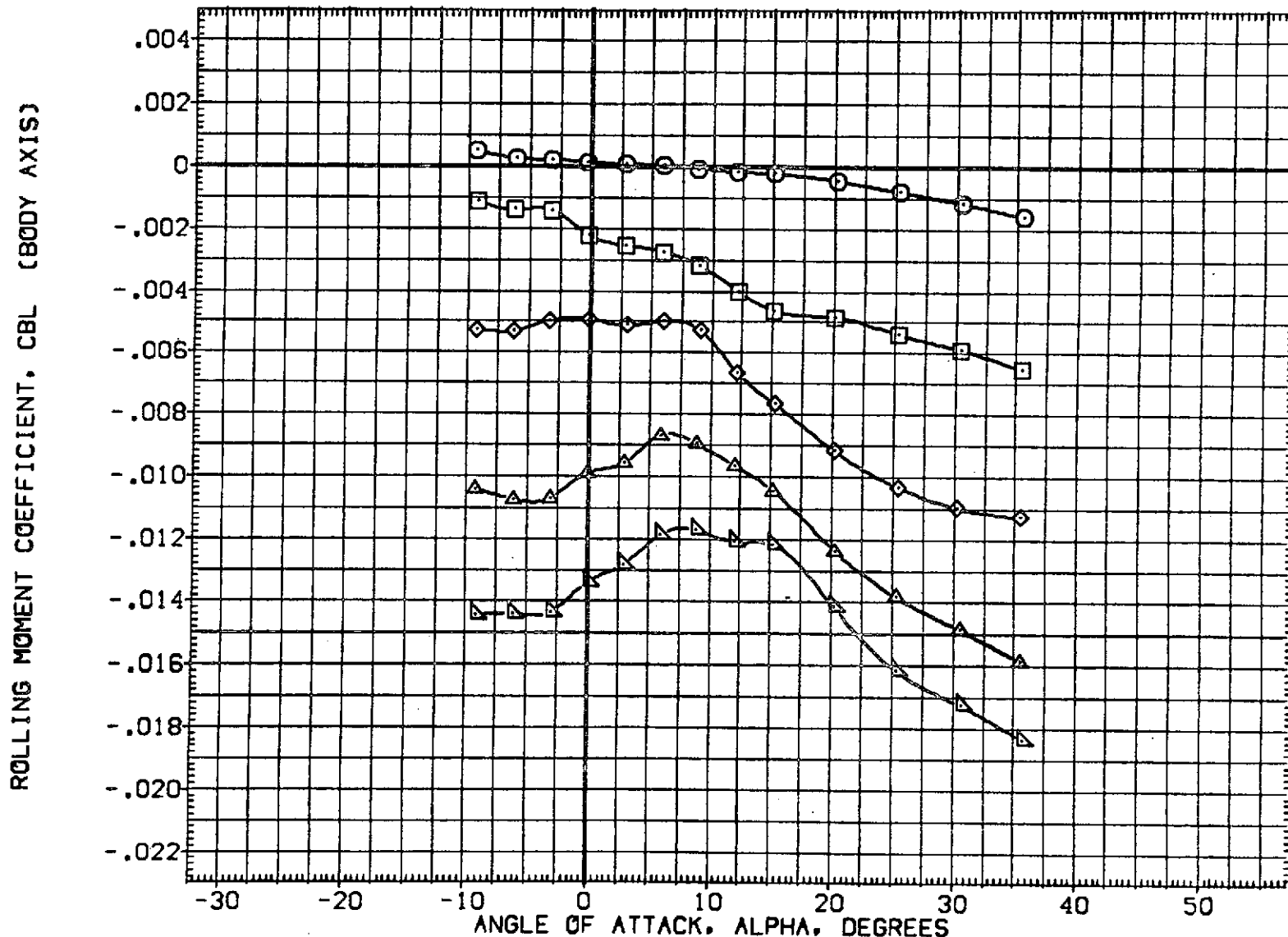


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | FCRCS | TCRCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|--------|---------|-----------------------|-----------|---------|
| (RHLF05) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 RCS OFF | 125.000 | 100.000 | 79.000 | 36.000 | SREF | 2690.0000 | 59. FT. |
| (RHL058) | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 [AIR] | 125.000 | 100.000 | 79.000 | 36.000 | LREF | 474.8100 | IN. |
| (RHL059) | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 [AIR] | 125.000 | 266.000 | 90.000 | 96.000 | BREF | 936.6800 | IN. |
| (RHL060) | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 [AIR] | 125.000 | 482.000 | 84.000 | 174.000 | XMRP | 1076.7000 | IN. |
| (RHL061) | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 [AIR] | 125.000 | 652.000 | 87.000 | 236.000 | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

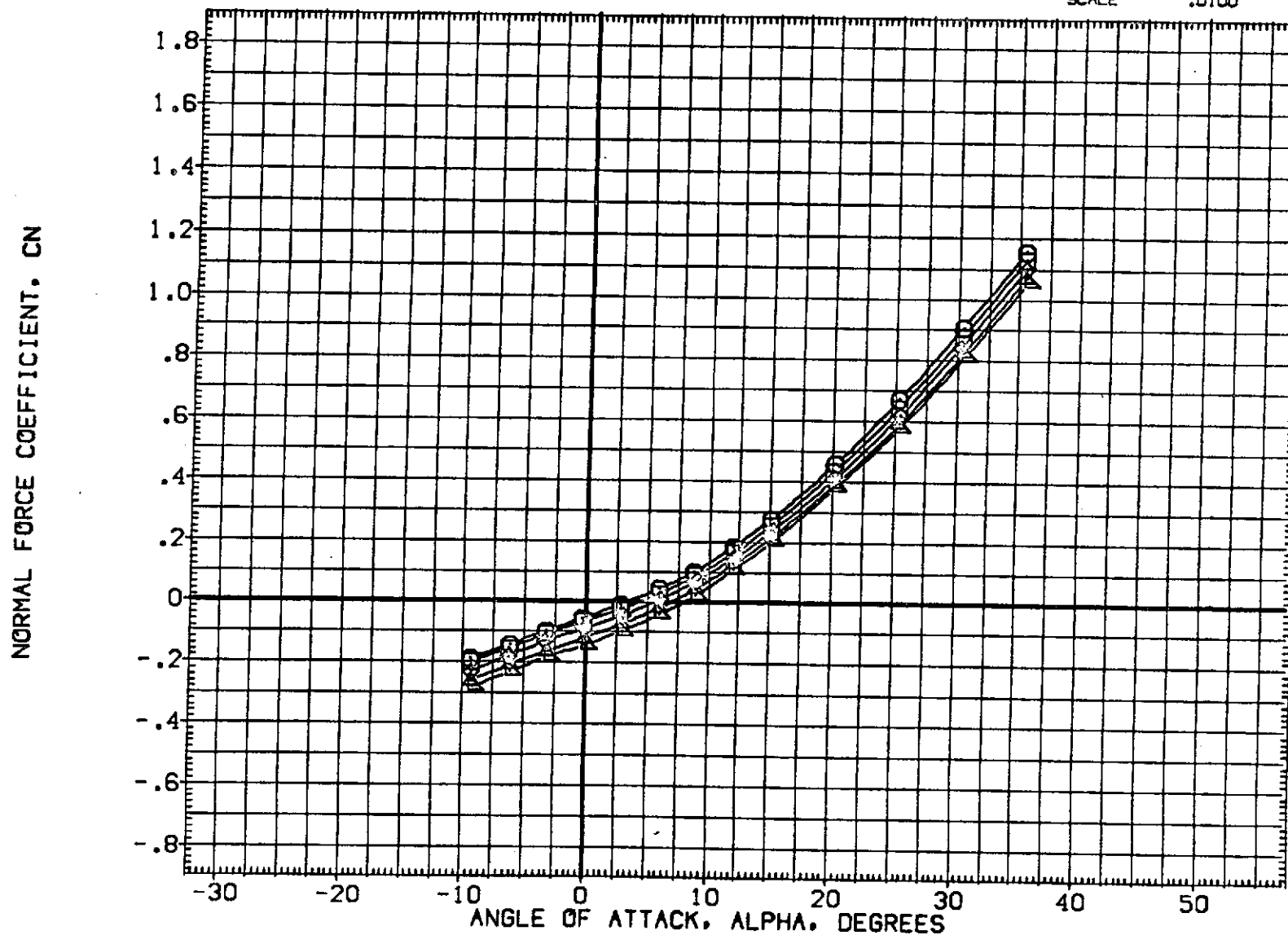


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, $Q(\text{PSF}) = 125$ ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHLF05) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | 100.000 | 79.000 | 36.000 | SREF 2690.0000 SQ.FT. |
| (RHL058) | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) | 125.000 | 100.000 | 80.000 | 96.000 | LREF 474.8100 IN. |
| (RHL059) | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) | 125.000 | 266.000 | 84.000 | 174.000 | BREF 936.6800 IN. |
| (RHL060) | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) | 125.000 | 482.000 | 87.000 | 236.000 | XMRF 1076.7000 IN. |
| (RHL061) | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) | 125.000 | 652.000 | | | YMRF .0000 IN. |
| | | | | | | ZMRF 375.0000 IN. |
| | | | | | | SCALE .0100 |

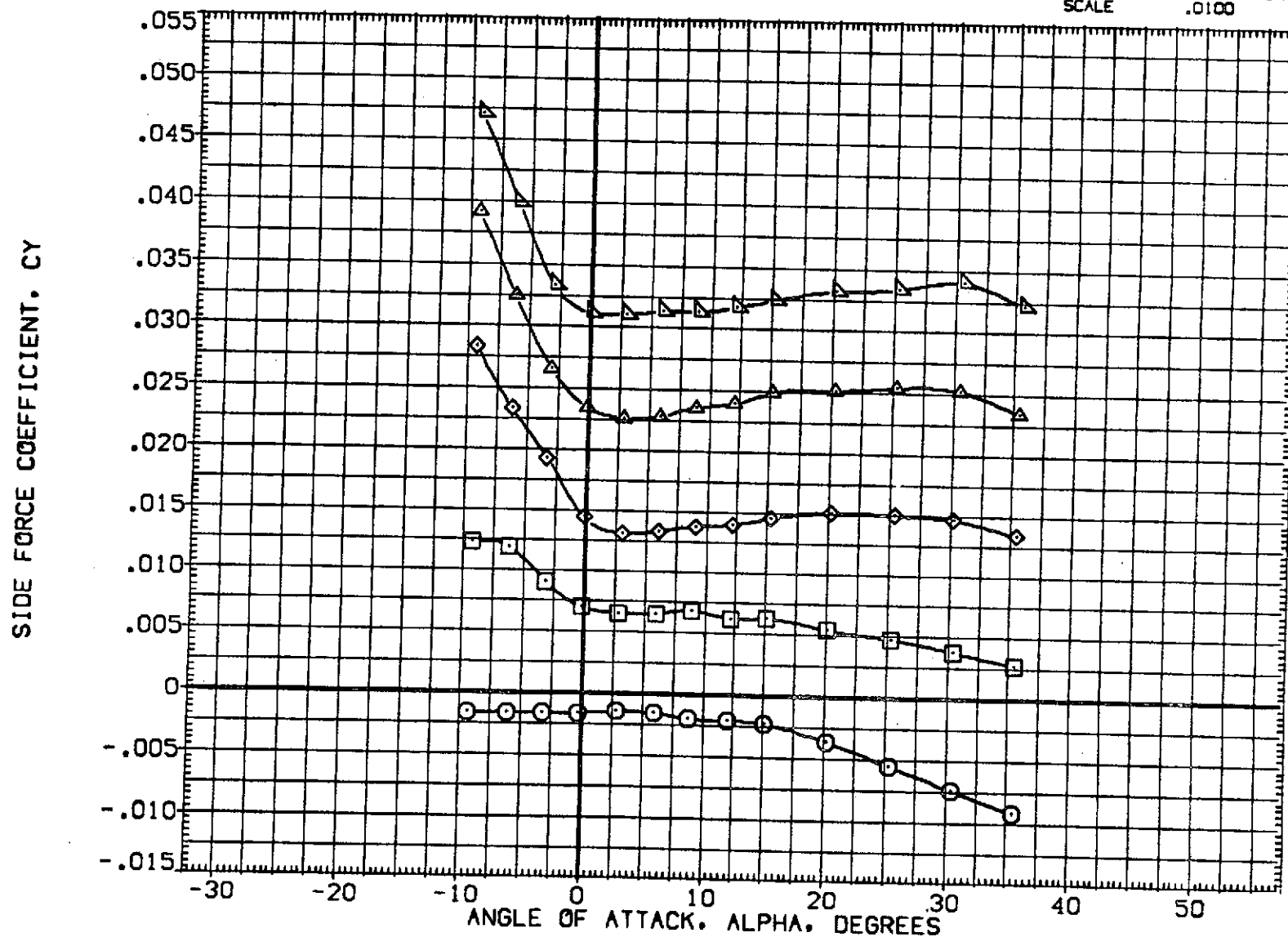


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|--------|---------|-----------------------|-----------|--------|
| (RHL05) | QA82 CFHT113 MODEL 32-0 OR8 V/N49 | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHL058) | QA82 CFHT113 MODEL 32-0 OR8 V/N83 | 125.000 | 100.000 | 79.000 | 36.000 | LREF | 474.8100 | IN. |
| (RHL059) | QA82 CFHT113 MODEL 32-0 OR8 V/N83 | 125.000 | 268.000 | 80.000 | 96.000 | BREF | 936.6800 | IN. |
| (RHL060) | QA82 CFHT113 MODEL 32-0 OR8 V/N83 | 125.000 | 482.000 | 84.000 | 174.000 | XMRP | 1076.7000 | IN. |
| (RHL061) | QA82 CFHT113 MODEL 32-0 OR8 V/N83 | 125.000 | 652.000 | 87.000 | 236.000 | YMRP | .0000 | IN. |
| | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

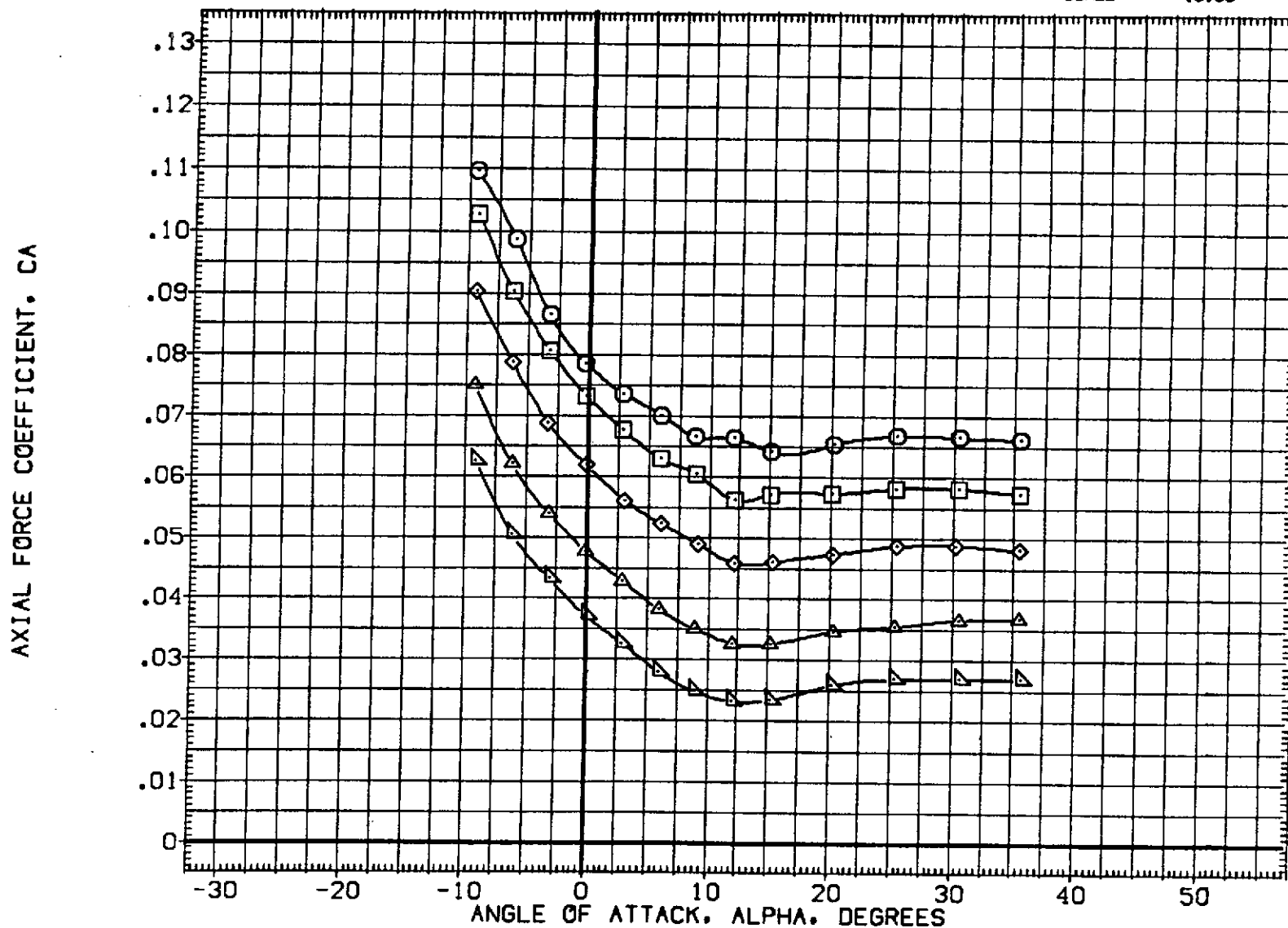


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC58] | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 | [AIR] |
| [CHLC59] | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 | [AIR] |
| [CHLC60] | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 | [AIR] |
| [CHLC61] | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 | [AIR] |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|---------|-----------------------|
| 125.000 | 100.000 | 79.000 | 36.000 | SREF 2690.0000 SQ.FT. |
| 125.000 | 266.000 | 80.000 | 96.000 | LREF 474.8100 IN. |
| 125.000 | 482.000 | 84.000 | 174.000 | BREF 936.6800 IN. |
| 125.000 | 652.000 | 87.000 | 236.000 | XMRF 1076.7000 IN. |
| | | | | YMRF .0000 IN. |
| | | | | ZMRF 375.0000 IN. |
| | | | | SCALE .0100 |

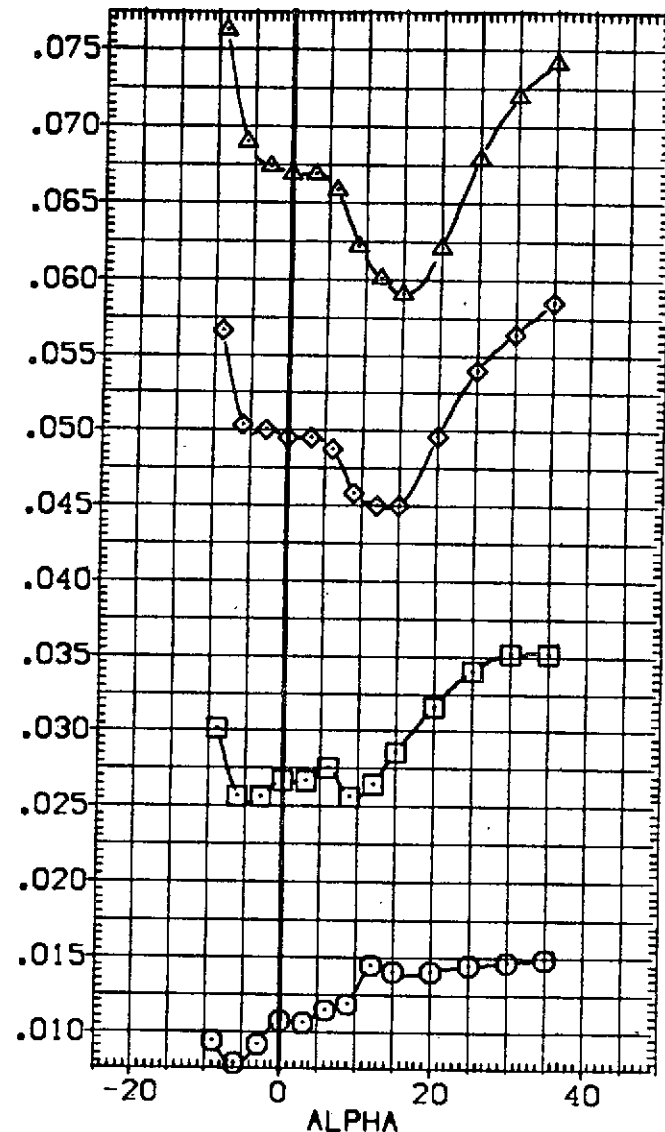
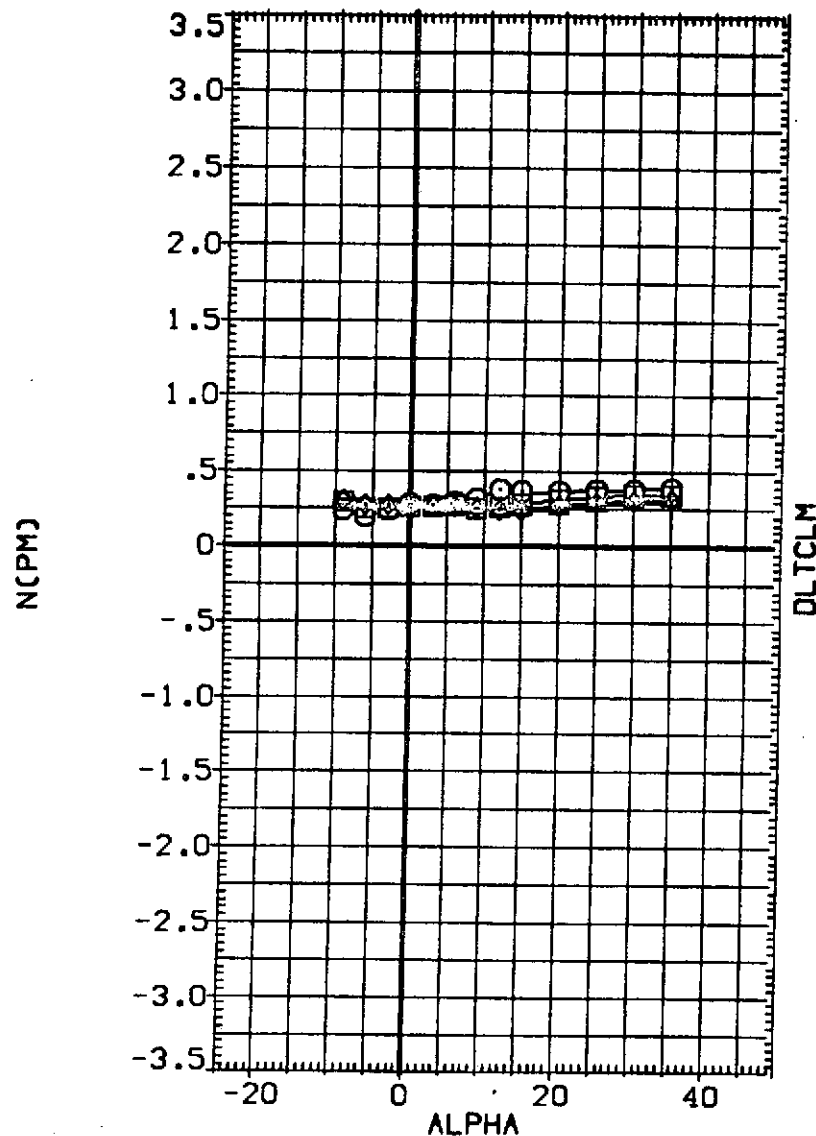


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS. Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC58) | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 | (AIR) |
| (CHLC59) | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 | (AIR) |
| (CHLC60) | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 | (AIR) |
| (CHLC61) | 0A82 CFHT113 MODEL 32-0 OR8 V/N83 | (AIR) |

| Q(PSF) | FORCS | TORCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 100.000 | 79.000 | 36.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 265.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 482.000 | 84.000 | 174.000 | BREF | 936.5800 IN. |
| 125.000 | 652.000 | 87.000 | 236.000 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

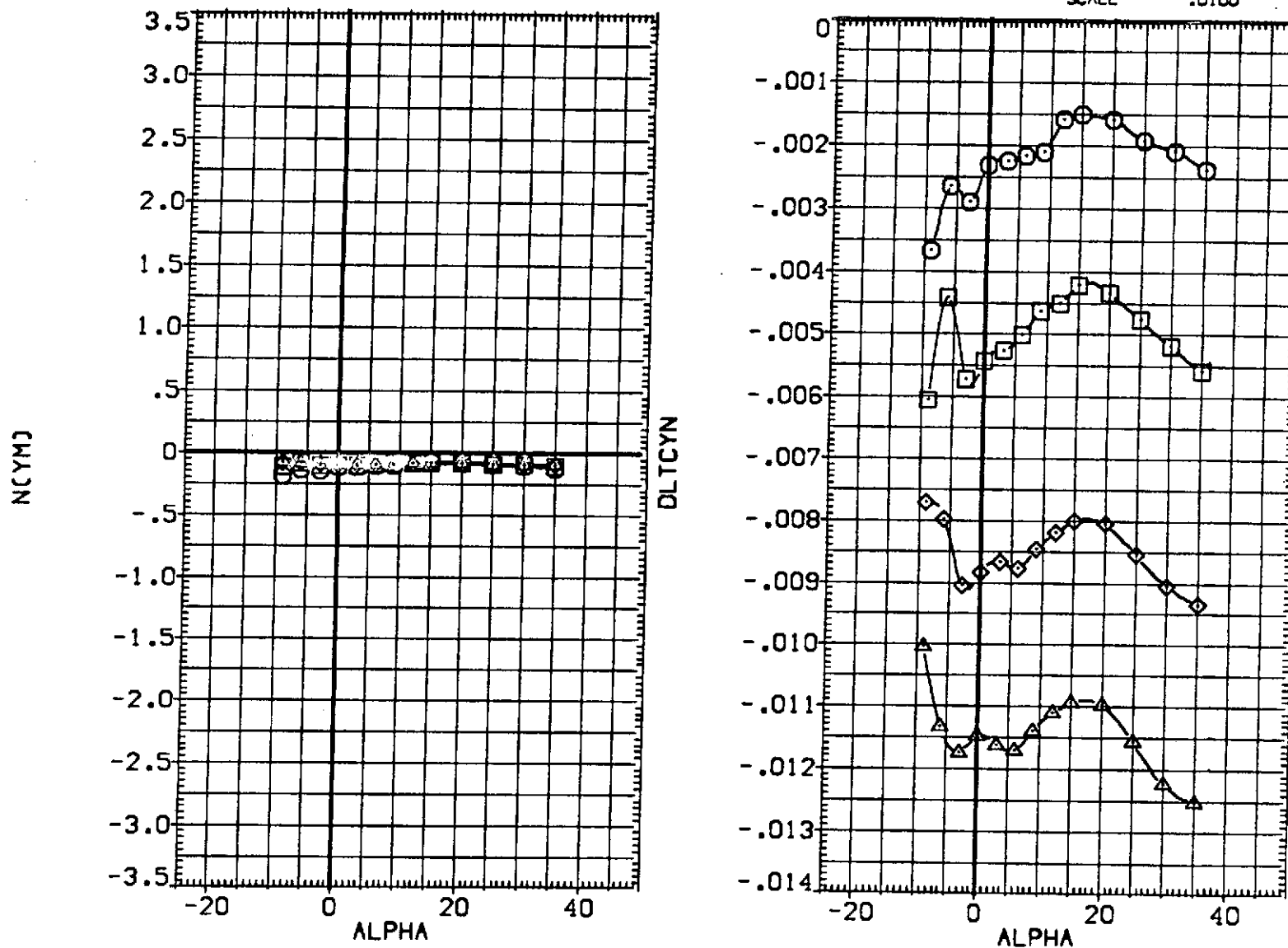


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC58) | QA82 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) |
| (CHLC59) | QA82 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) |
| (CHLC60) | QA82 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) |
| (CHLC61) | QA82 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 125.000 | 100.000 | 79.000 | 36.000 | SREF | 2690.0000 | SQ.FT. |
| 125.000 | 266.000 | 80.000 | 96.000 | LREF | 474.8100 | IN. |
| 125.000 | 482.000 | 84.000 | 174.000 | BREF | 936.6800 | IN. |
| 125.000 | 652.000 | 87.000 | 236.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

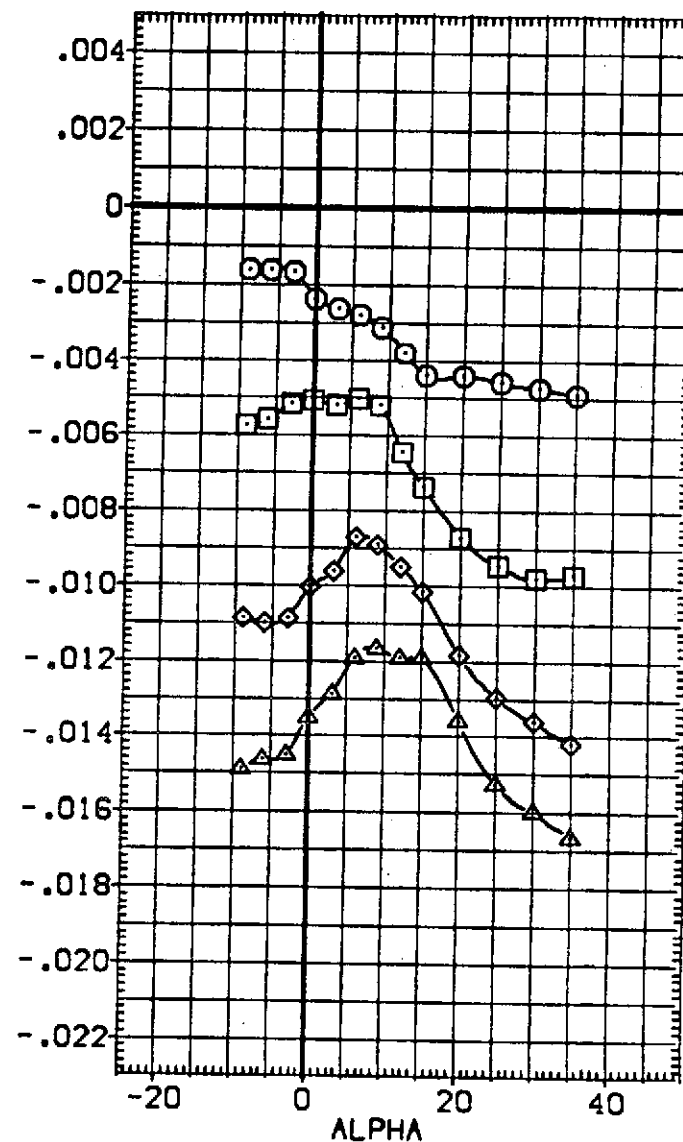
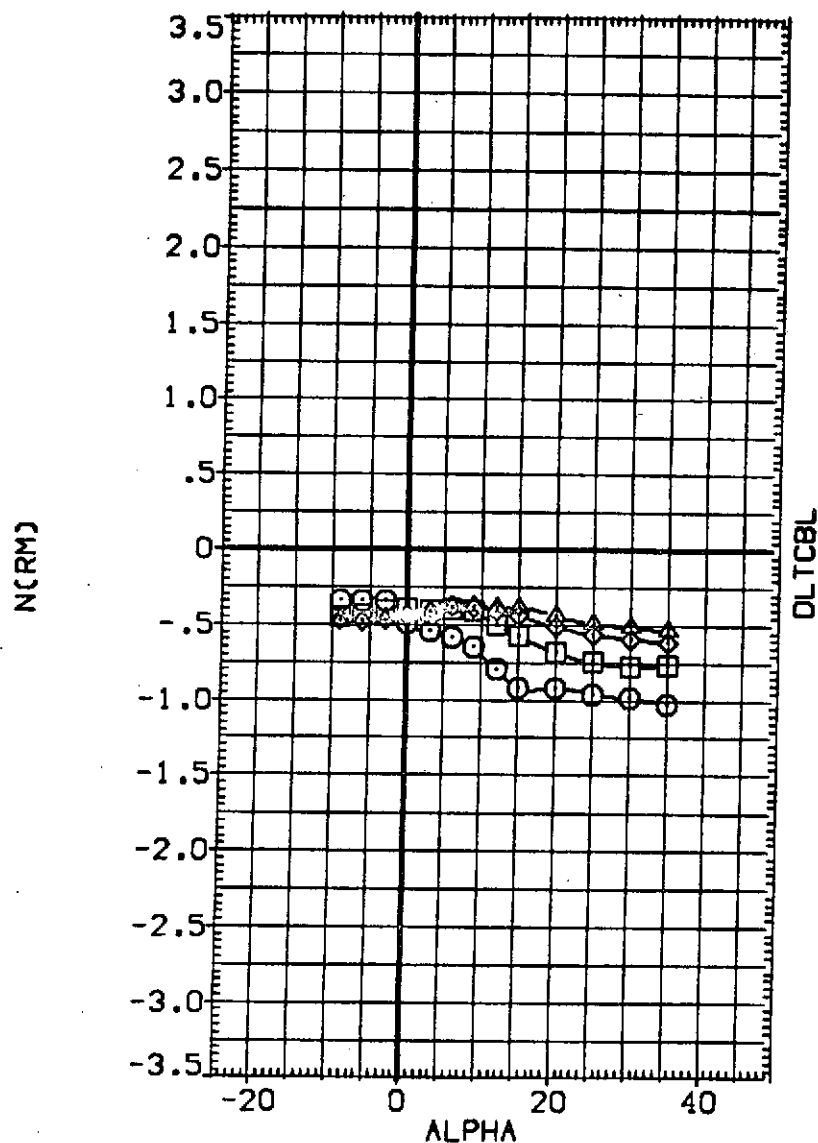


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC58] □ | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) |
| [CHLC59] □ | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) |
| [CHLC60] ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) |
| [CHLC61] △ | 0A82 CFHT113 MODEL 32-0 ORB V/N83 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 125.000 | 100.000 | 79.000 | 36.000 | SREF | 2690.0000 | SG.FT. |
| 125.000 | 266.000 | 80.000 | 96.000 | LREF | 474.8100 | IN. |
| 125.000 | 482.000 | 84.000 | 174.000 | BREF | 936.6800 | IN. |
| 125.000 | 652.000 | 87.000 | 236.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

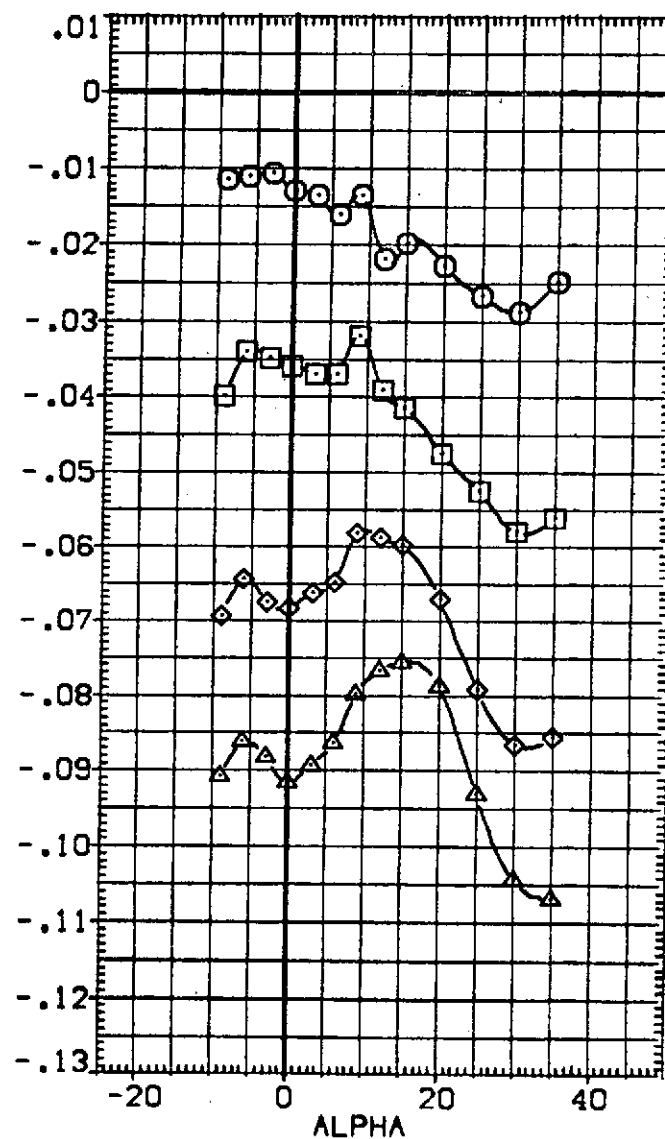
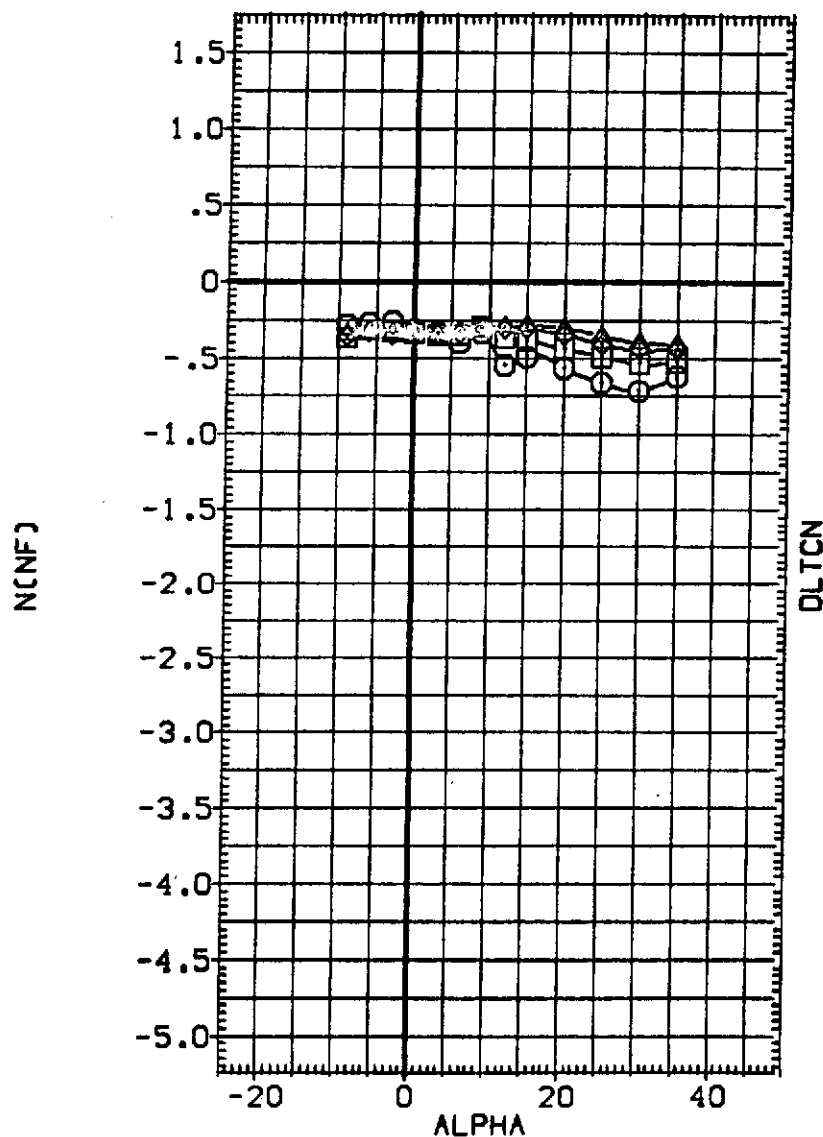


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC58) | QAB2 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) |
| (CHLC59) | QAB2 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) |
| (CHLC60) | QAB2 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) |
| (CHLC61) | QAB2 CFHT113 MODEL 32-0 ORB V/N83 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 100.000 | 79.000 | 36.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 266.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 482.000 | 84.000 | 174.000 | BREF | 936.6800 IN. |
| 125.000 | 652.000 | 87.000 | 236.000 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

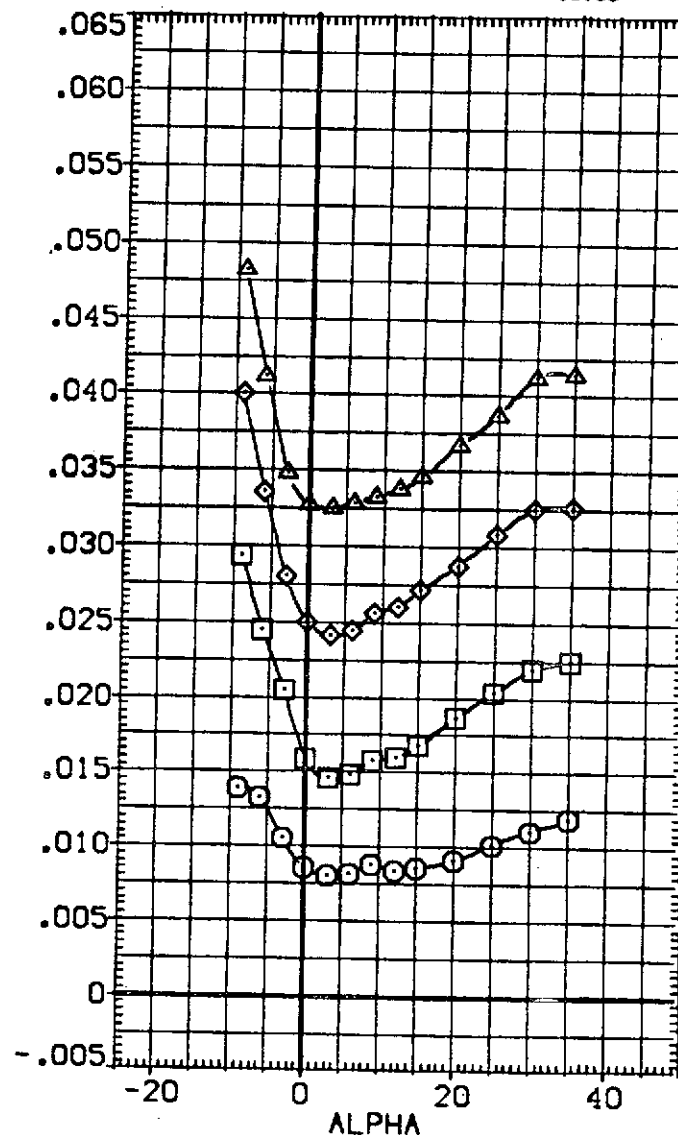
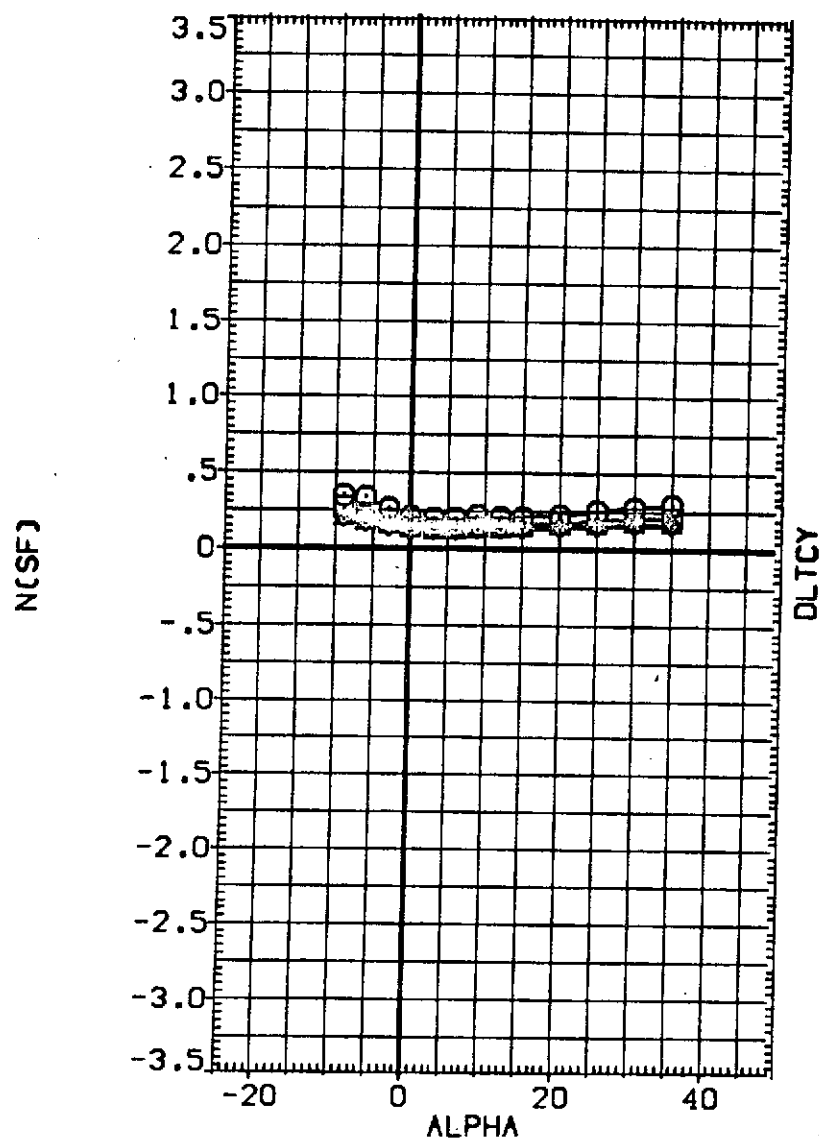


FIG. 27 EFFECT OF T/QA USING AIR WITH N83 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHL05) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL062) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 (AIR) | 125.000 | 110.000 | 77.000 | 36.000 | LREF 474.8100 IN. |
| (RHL063) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 (AIR) | 125.000 | 272.000 | 79.000 | 96.000 | BREF 936.6800 IN. |
| (RHL064) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 (AIR) | 125.000 | 490.000 | 86.000 | 174.000 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

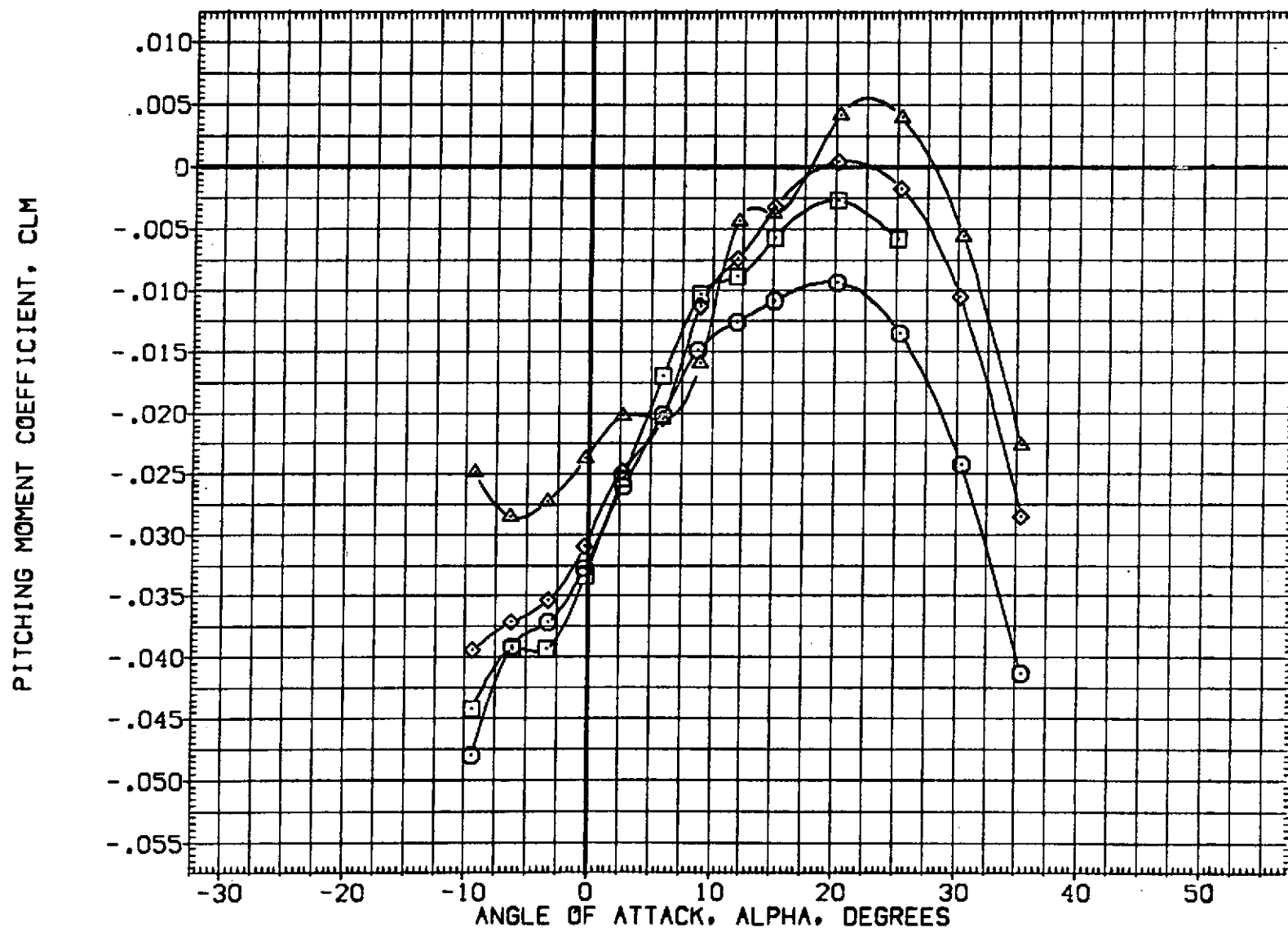


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| [RHL05] | QAB2 CFHT113 MODEL 32-0 DRB V/N49 RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| [RHL062] | QAB2 CFHT113 MODEL 32-0 DRB V/N84 [AIR] | 125.000 | 110.000 | 77.000 | 36.000 | LREF 474.8100 IN. |
| [RHL063] | QAB2 CFHT113 MODEL 32-0 DRB V/N84 [AIR] | 125.000 | 272.000 | 79.000 | 96.000 | BREF 936.6800 IN. |
| [RHL064] | QAB2 CFHT113 MODEL 32-0 DRB V/N84 [AIR] | 125.000 | 490.000 | 86.000 | 174.000 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

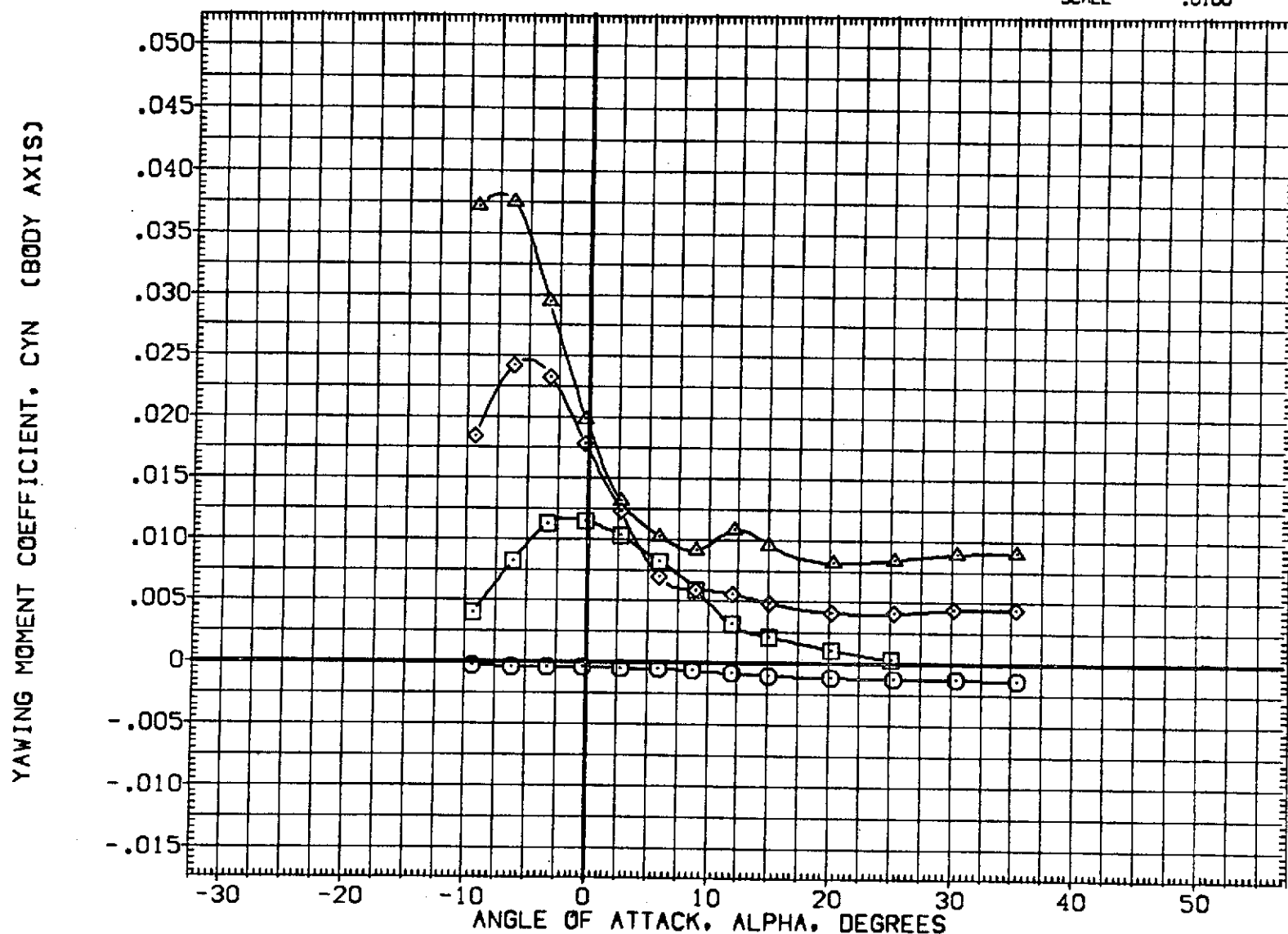


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|--------|---------|-----------------------|
| (RHLF05) | QAB2 CFHT113 MODEL 32-0 DR8 V/N49 | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL062) | QAB2 CFHT113 MODEL 32-0 DR8 V/N84 | 125.000 | 110.000 | 77.000 | 36.000 | LREF 474.9100 IN. |
| (RHL063) | QAB2 CFHT113 MODEL 32-0 DR8 V/N84 | 125.000 | 272.000 | 79.000 | 96.000 | BREF 936.6800 IN. |
| (RHL064) | QAB2 CFHT113 MODEL 32-0 DR8 V/N84 | 125.000 | 490.000 | 86.000 | 174.000 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

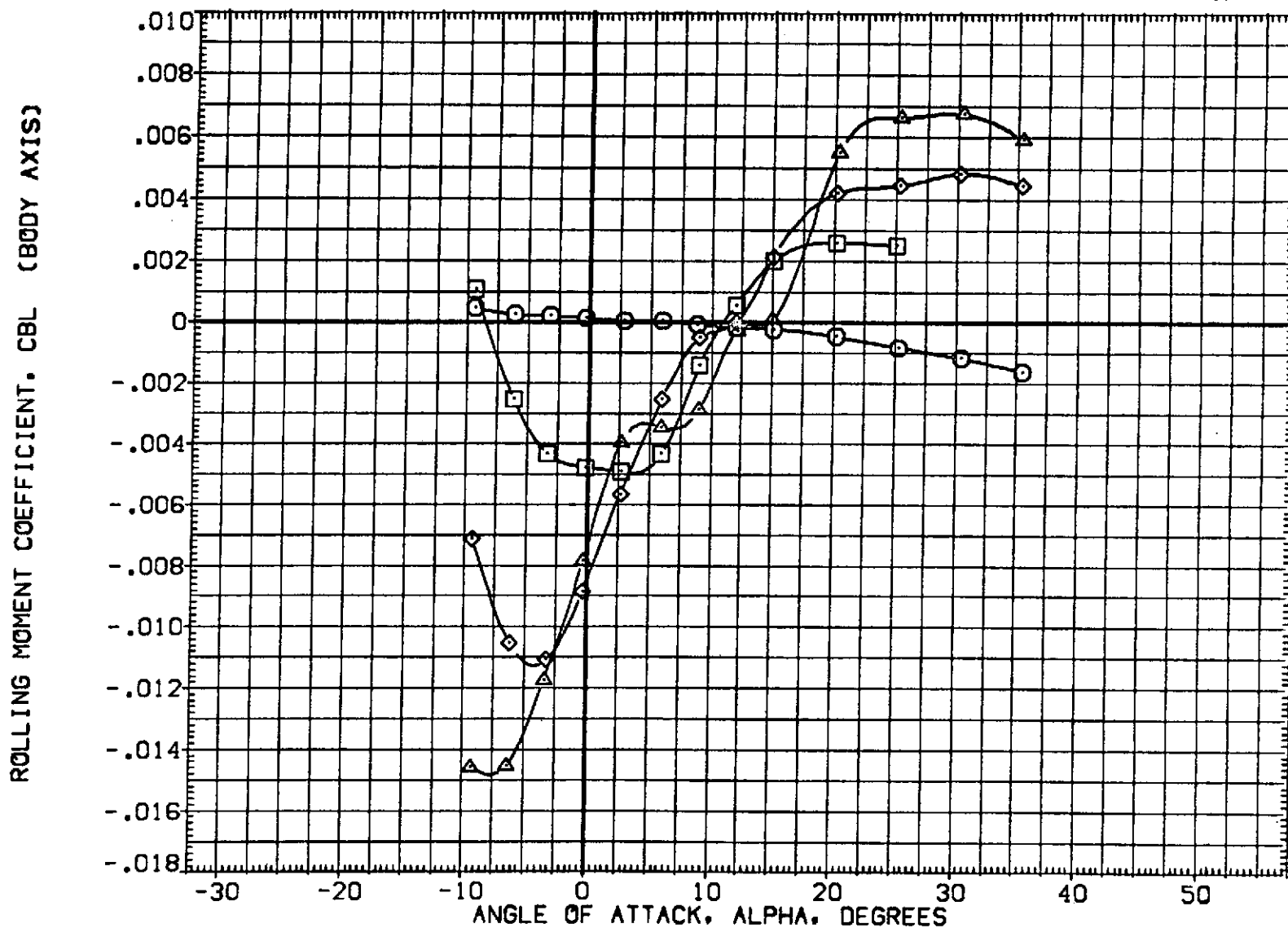


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|---------|--------|---------|-----------------------|------------------|
| [RHLF05] | 0A82 CFHT113 MODEL 32-0 ORB V/N49 | RCS OFF | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHL062] | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | [AIR] | 125.000 | 110.000 | 77.000 | 36.000 | LREF | 474.8100 IN. |
| [RHL063] | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | [AIR] | 125.000 | 272.000 | 79.000 | 96.000 | BREF | 936.6800 IN. |
| [RHL064] | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | [AIR] | 125.000 | 490.000 | 86.000 | 174.000 | XM RP | 1076.7000 IN. |
| | | | | | | | YM RP | .0000 IN. |
| | | | | | | | ZM RP | 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

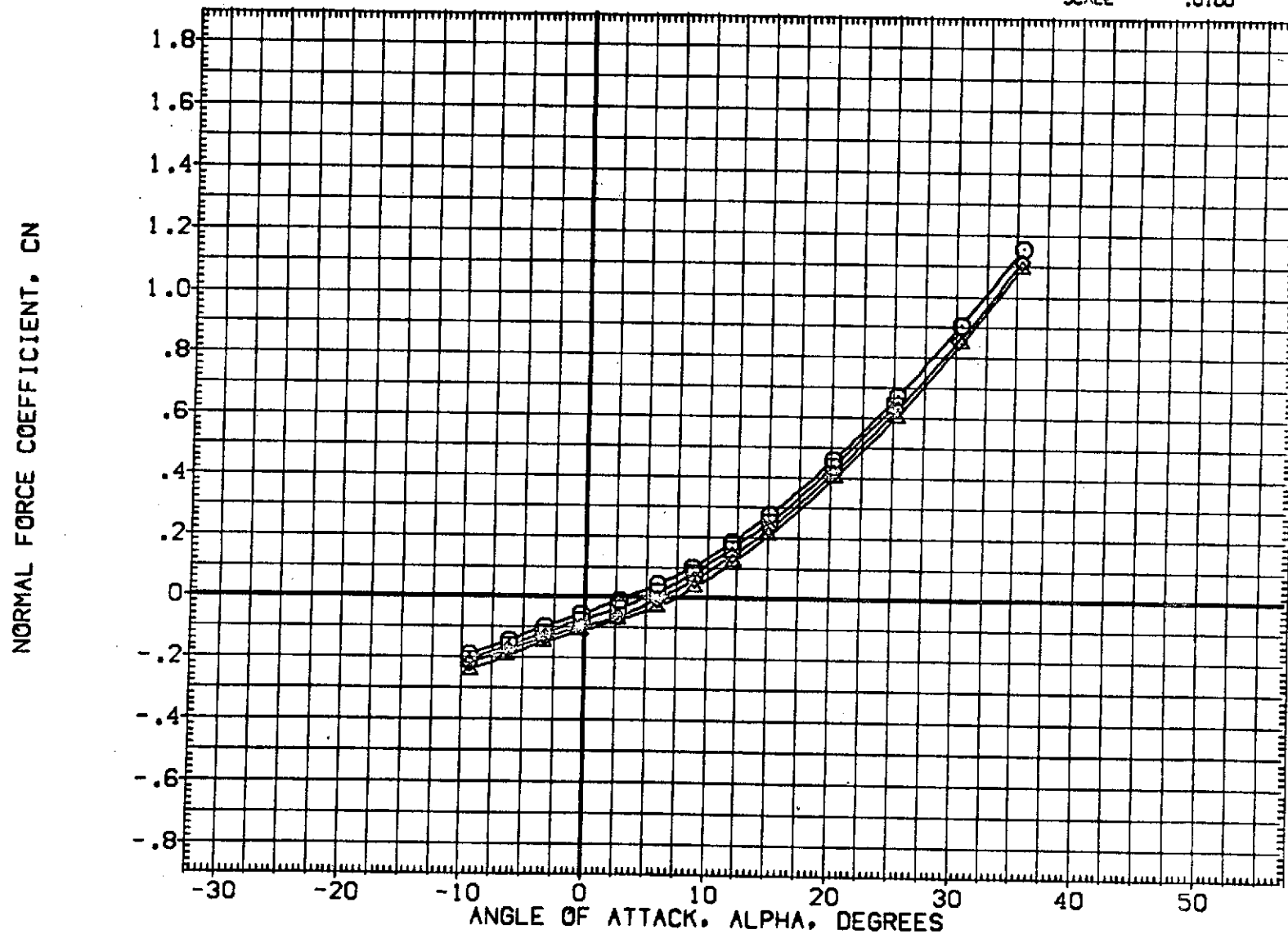


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, Q(PSF)= 125 ON AERO CHARACT
 (A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRS | TCRS | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHLF05) | QAB2 CFHT113 MODEL 32-0 DRB V/N49 RCS OFF | 125,000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL062) | QAB2 CFHT113 MODEL 32-0 DRB V/N84 [AIR] | 125,000 | 110,000 | 77,000 | 36,000 | LREF 474.8100 IN. |
| (RHL063) | QAB2 CFHT113 MODEL 32-0 DRB V/N84 [AIR] | 125,000 | 272,000 | 79,000 | 96,000 | BREF 936.6800 IN. |
| (RHL064) | QAB2 CFHT113 MODEL 32-0 DRB V/N84 [AIR] | 125,000 | 490,000 | 86,000 | 174,000 | XMRP 1076.7000 IN. |
| | | | | | | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

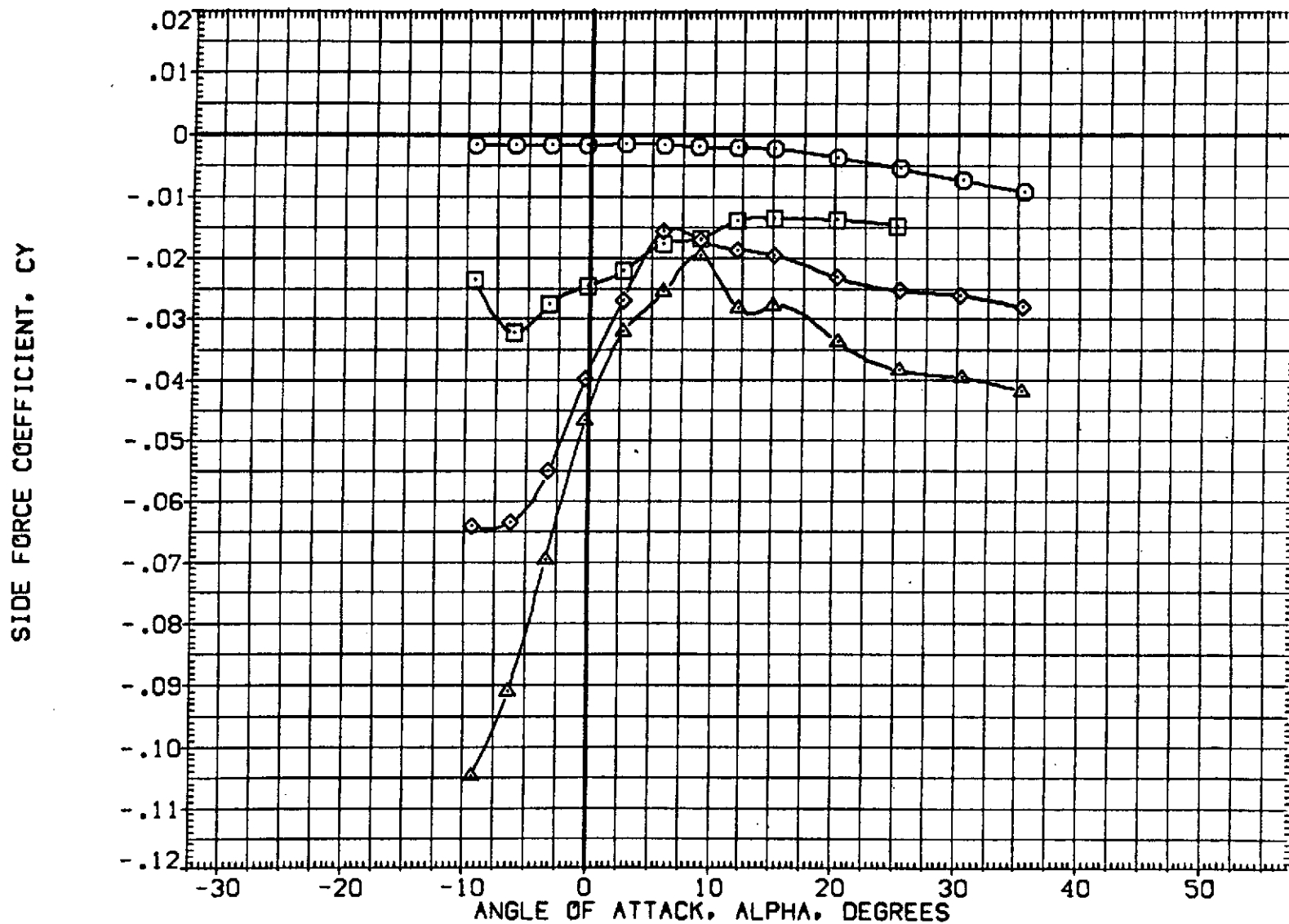


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | RCS OFF | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|-----------------|-----------------------------------|---------|---------|---------|--------|---------|-----------------------|------------------|
| (RHL05) | QAB2 CFHT113 MODEL 32-0 ORB V/N49 | (AIR) | 125.000 | .000 | .000 | .000 | SREF | 2680.0000 SQ.FT. |
| (RHL062) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) | 125.000 | 110.000 | 77.000 | 36.000 | LREF | 474.8100 IN. |
| (RHL063) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) | 125.000 | 272.000 | 79.000 | 96.000 | BREF | 936.6800 IN. |
| (RHL064) | QAB2 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) | 125.000 | 490.000 | 86.000 | 174.000 | XMRP | 1076.7000 IN. |
| | | | | | | | YMRP | .0000 IN. |
| | | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | | SCALE | .0100 |

AXIAL FORCE COEFFICIENT, CA

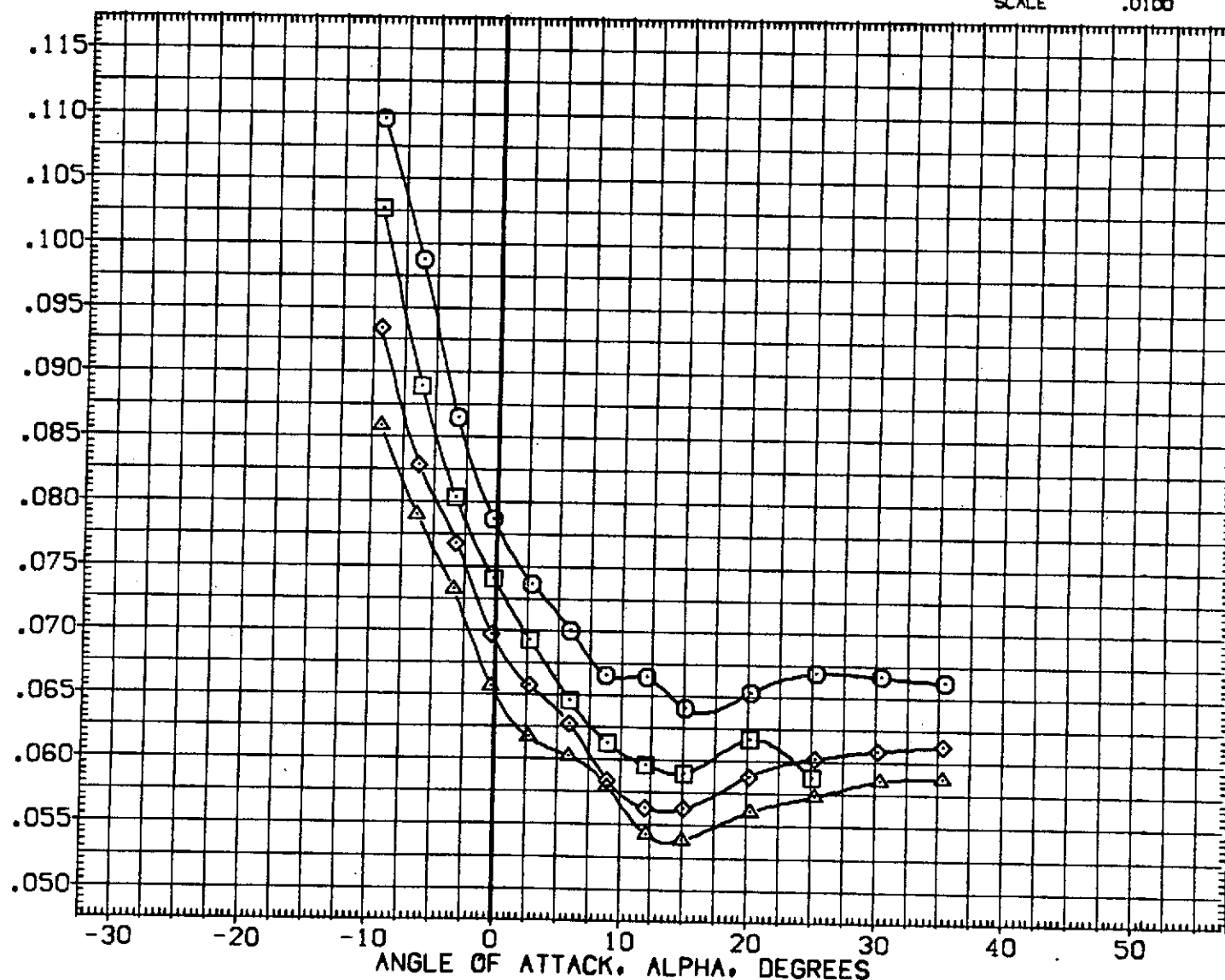


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | (AIR) |
|-----------------|-----------------------------------|-------|
| {CHLC62} | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |
| {CHLC63} | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |
| {CHLC64} | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|---------|---------|--------|---------|-----------------------|
| 125.000 | 110.000 | 77.000 | 36.000 | SREF 2690.0000 SQ.FT. |
| 125.000 | 272.000 | 79.000 | 96.000 | LREF 474.8100 IN. |
| 125.000 | 490.000 | 86.000 | 174.000 | BREF 936.6800 IN. |
| | | | | XMRP 1076.7000 IN. |
| | | | | YMRP .0000 IN. |
| | | | | ZMRP 375.0000 IN. |
| | | | | SCALE .0100 |

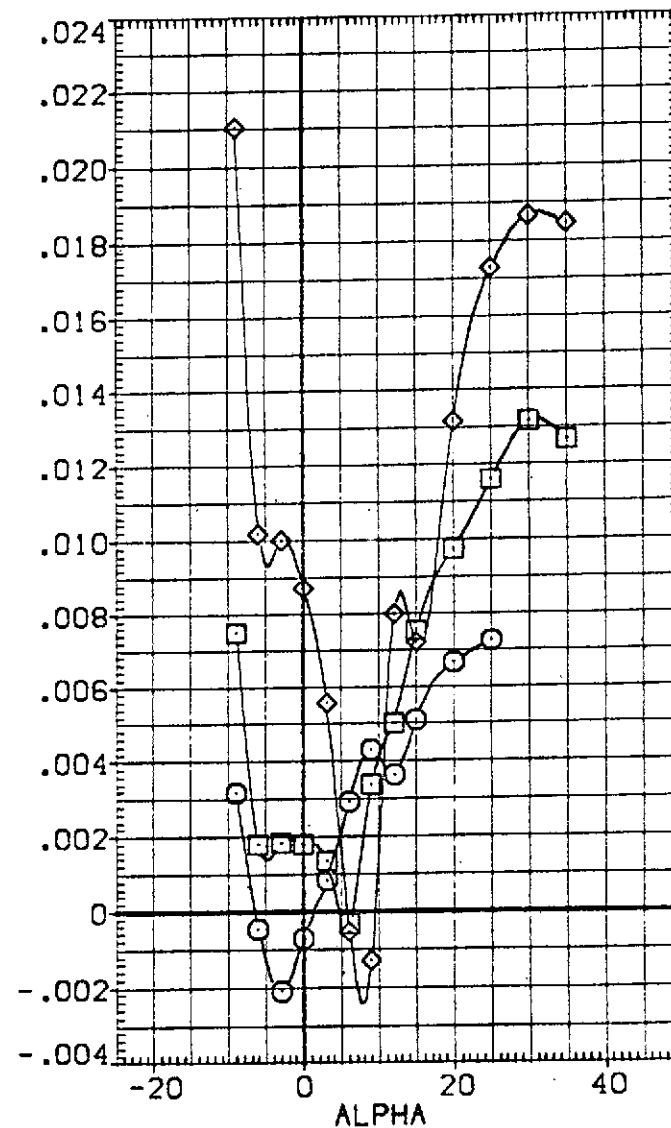
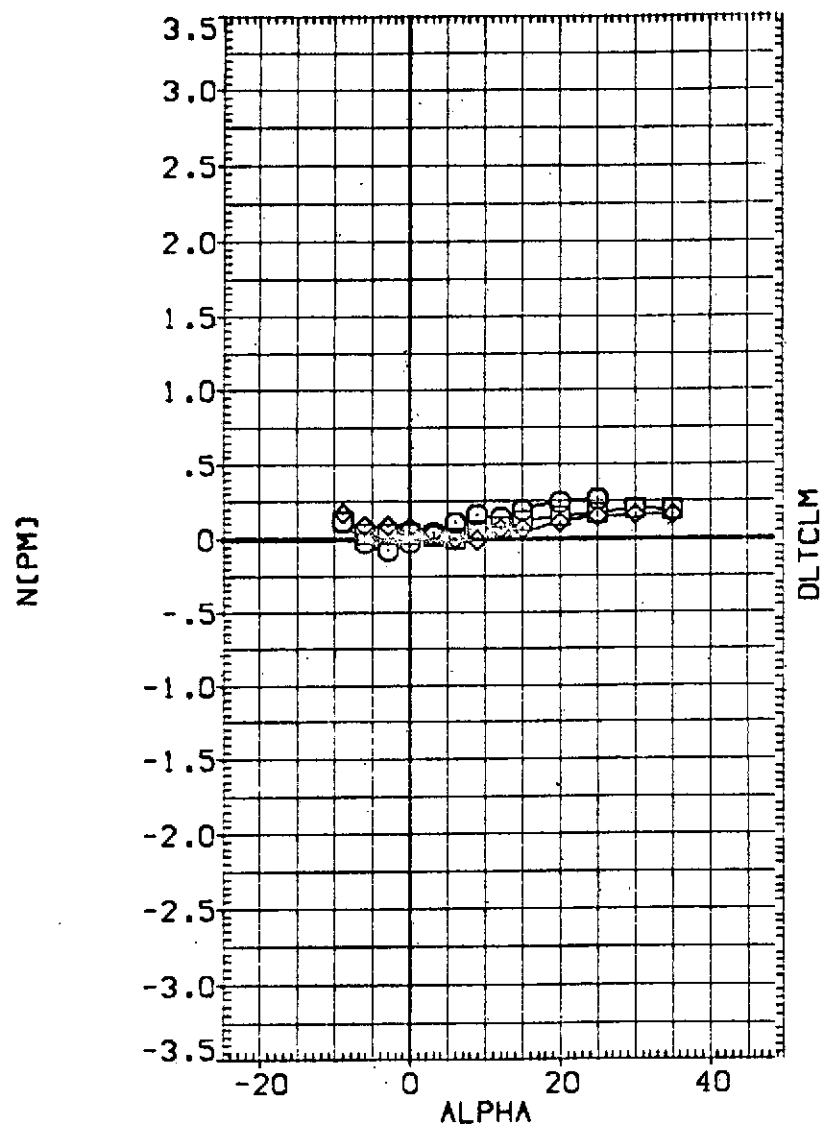


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

| | | | |
|----------|---|-----------------------------------|-------|
| (CHLC62) | ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |
| (CHLC63) | □ | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |
| (CHLC64) | ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|---------|
| 125.000 | 110.000 | 77.000 | 36.000 | SREF | 2690.0000 | 50. FT. |
| 125.000 | 272.000 | 79.000 | 96.000 | LREF | 474.8100 | IN. |
| 125.000 | 490.000 | 86.000 | 174.000 | BREF | 936.6800 | IN. |
| | | | | XMRF | 1076.7000 | IN. |
| | | | | YMRF | .0000 | IN. |
| | | | | ZMRF | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

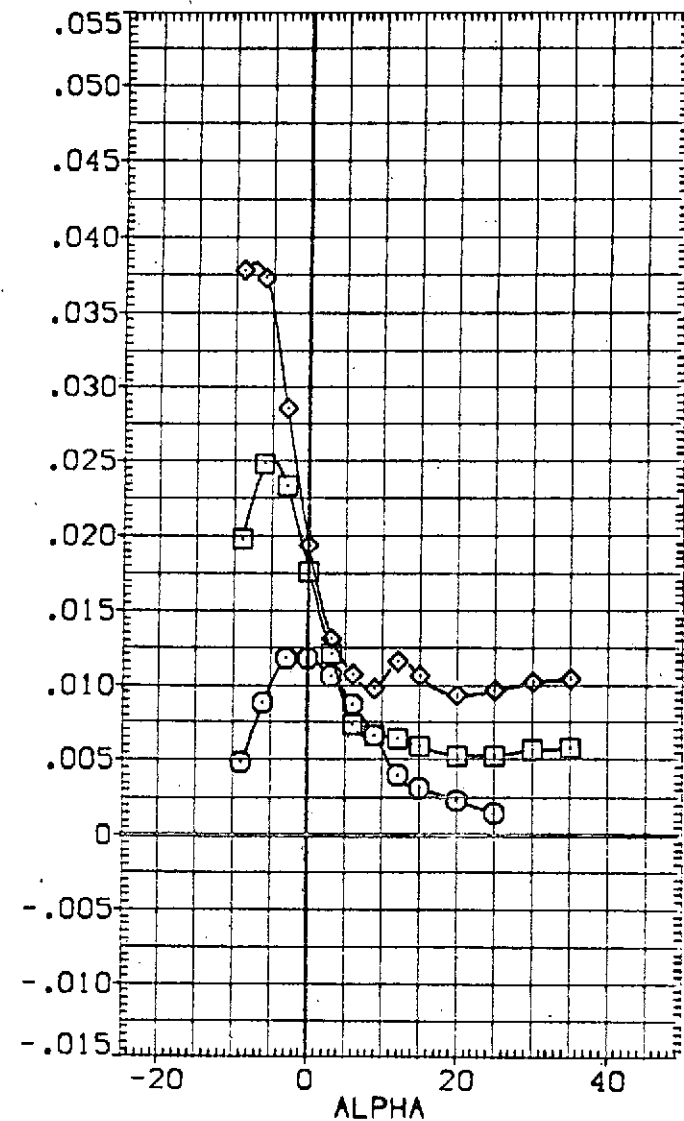
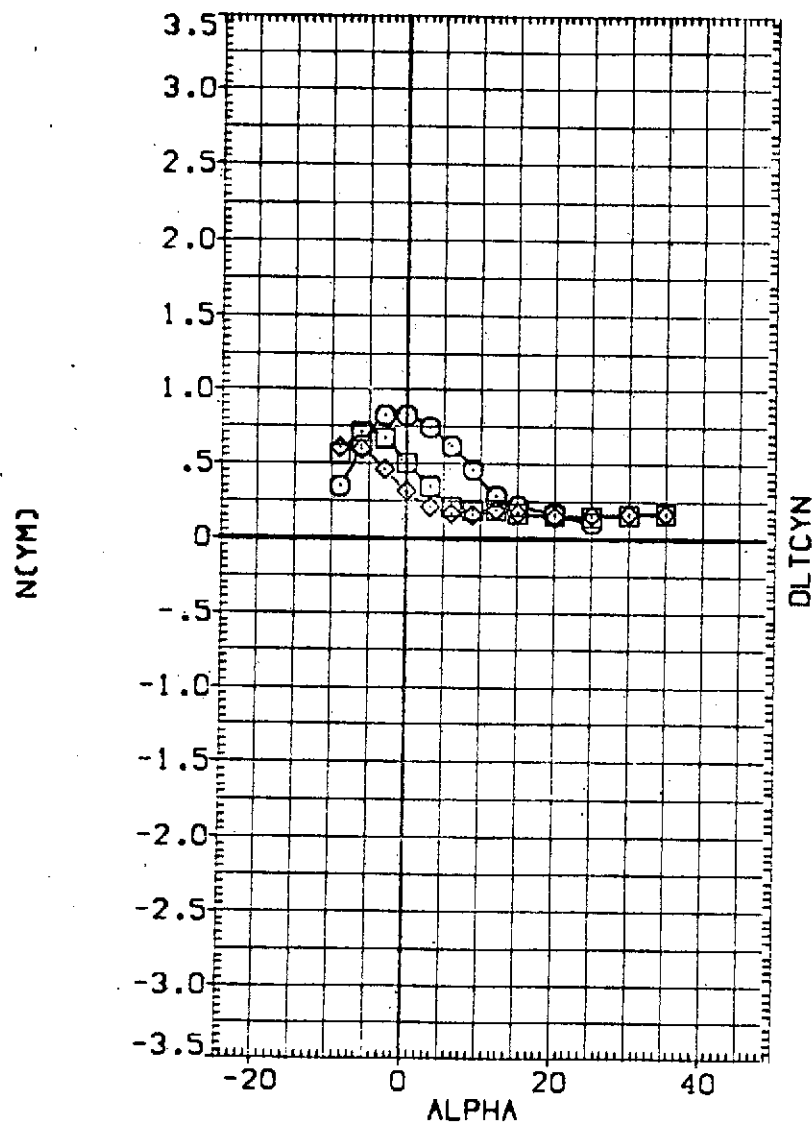


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, $Q(PSF) = 125$ ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC62) | DA82 CFHT113 MODEL 32-0 ORB V/N84 (AIR) |
| (CHLC63) | DA82 CFHT113 MODEL 32-0 ORB V/N84 (AIR) |
| (CHLC64) | DA82 CFHT113 MODEL 32-0 ORB V/N84 (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 125.000 | 110.000 | 77.000 | 36.000 | SREF | 2690.0000 | SQ.FT. |
| 125.000 | 272.000 | 79.000 | 96.000 | LREF | 474.8100 | IN. |
| 125.000 | 490.000 | 86.000 | 174.000 | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

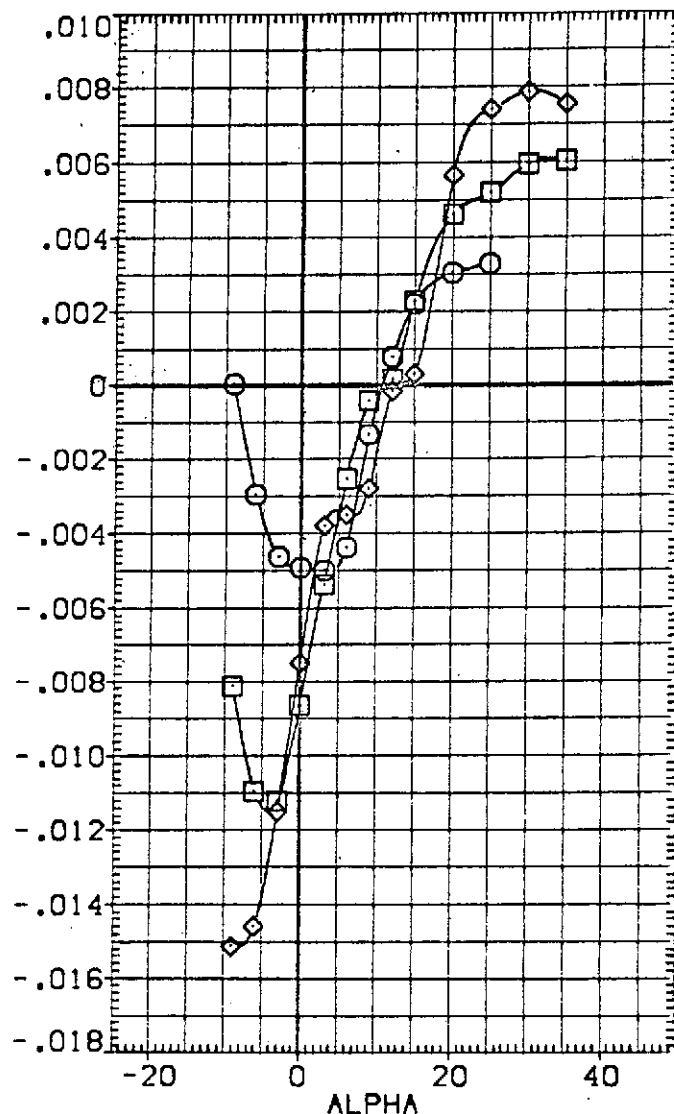
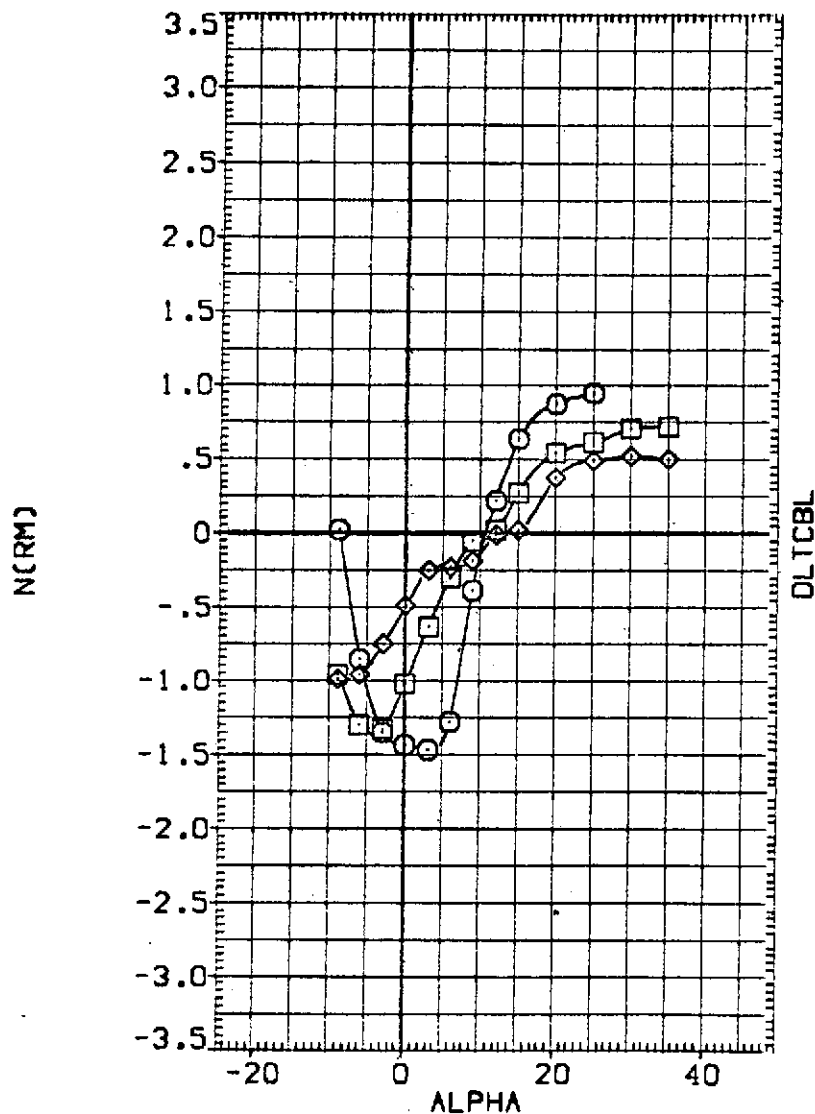


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS. Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC62) | DA82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |
| (CHLC63) | DA82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |
| (CHLC64) | DA82 CFHT113 MODEL 32-0 ORB V/N84 | (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 110.000 | 77.000 | 36.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 272.000 | 79.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 490.000 | 86.000 | 174.000 | BREF | 936.6800 IN. |
| | | | | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

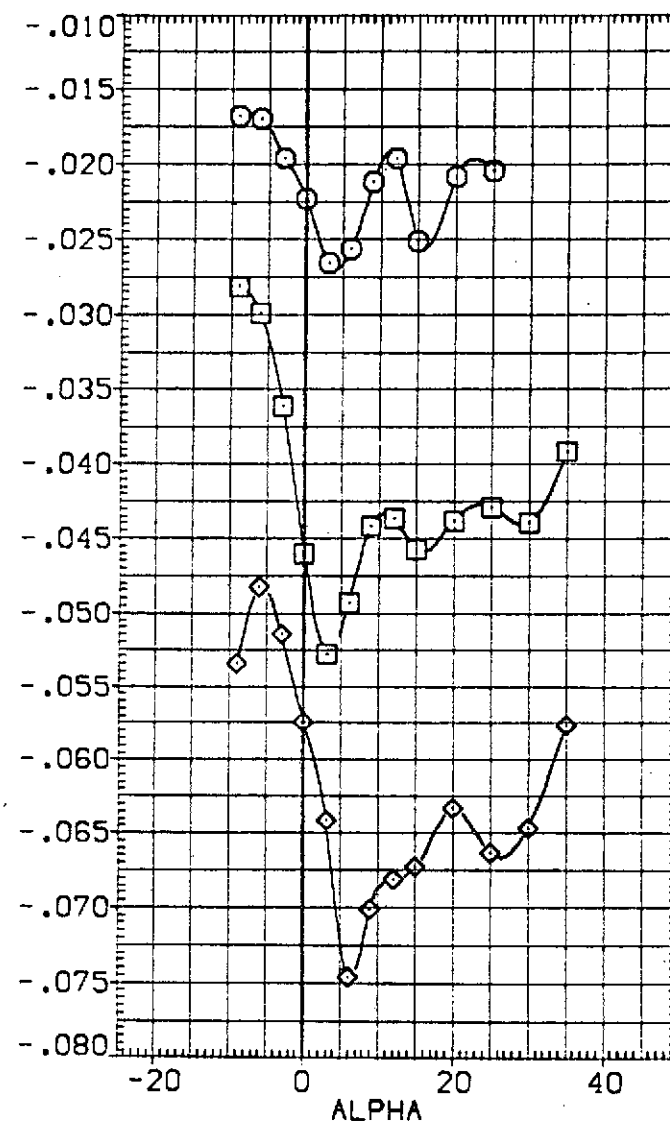
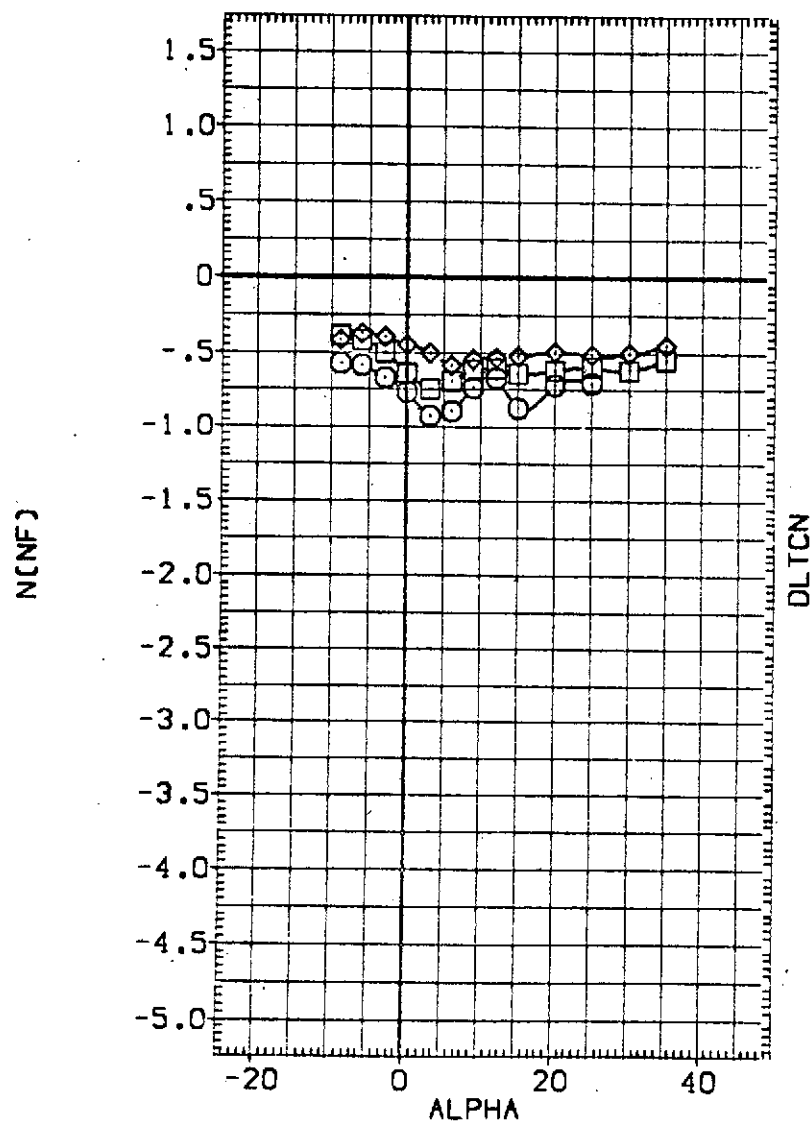


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, $Q(\text{PSF}) = 125$ ON AERO CHARACT
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| (CHLC62) | DA82 CFHT113 MODEL 32-G ORB V/N84 | (AIR) |
| (CHLC63) | DA82 CFHT113 MODEL 32-O ORB V/N84 | (AIR) |
| (CHLC64) | DA82 CFHT113 MODEL 32-O ORB V/N84 | (AIR) |

| Q(PSF) | PCRC5 | TCRC5 | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|--------|
| 125.000 | 110.000 | 77.000 | 36.000 | SREF | 2690.0000 | 50.FT. |
| 125.000 | 272.000 | 79.000 | 96.000 | LREF | 474.8100 | IN. |
| 125.000 | 490.000 | 86.000 | 174.000 | BREF | 936.6800 | IN. |
| | | | | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

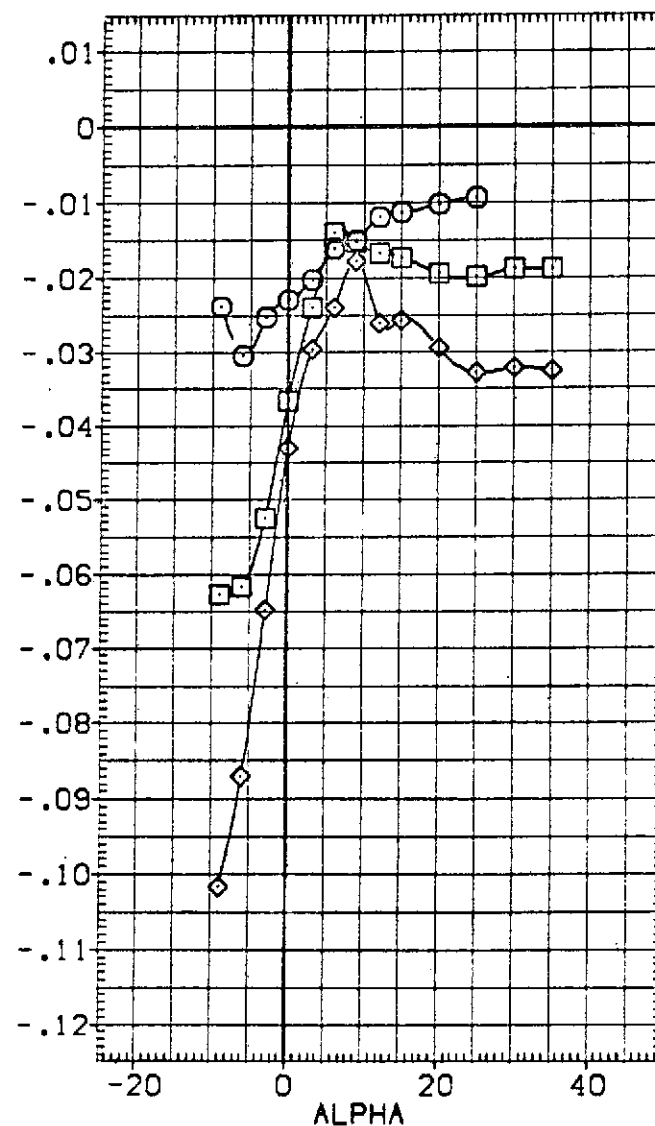
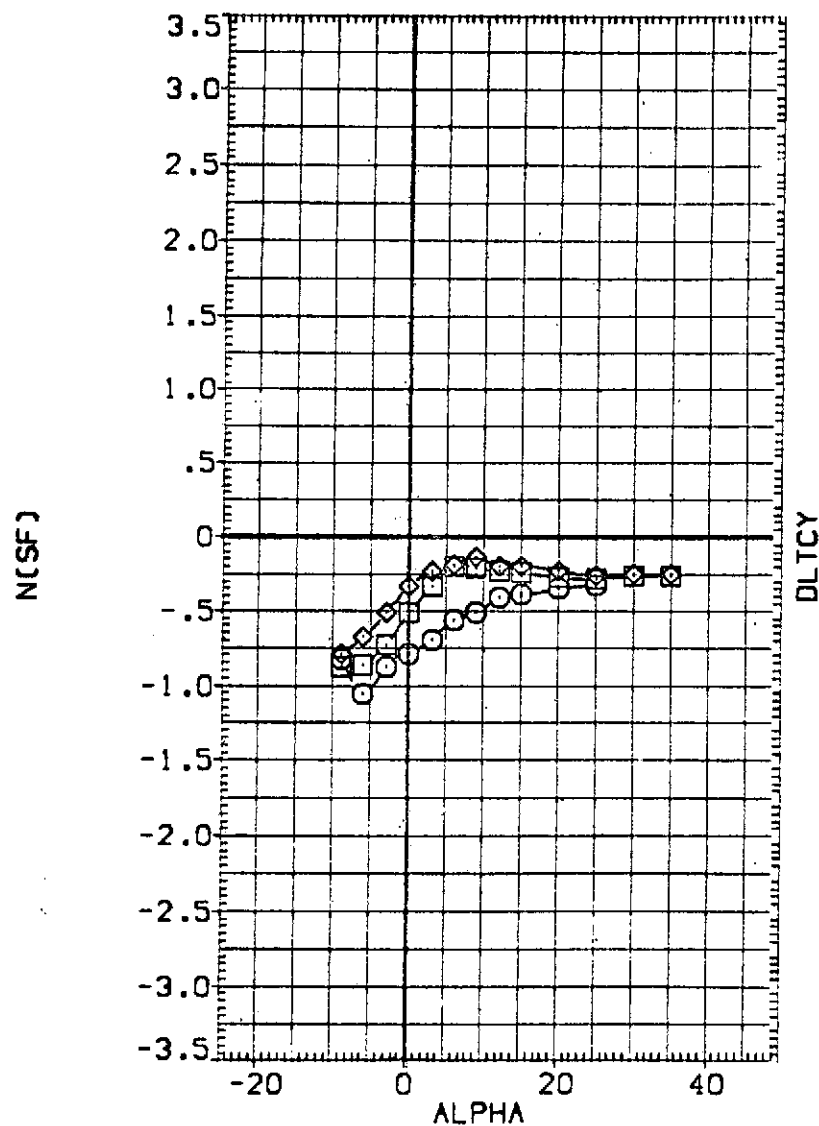


FIG. 28 EFFECT OF T/QA USING AIR WITH N84 JETS, $Q(PSF) = 125$ ON AERO CHARACT

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | | Q (PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION |
|-----------------|-----------------------------------|---------|---------|---------|--------|---------|-----------------------|
| (RHLF13) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL050) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | 98.000 | 86.000 | 36.000 | LREF 474.8100 IN. |
| (RHL051) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | 261.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| (RHL052) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | XMRP 1076.7000 IN. |
| (RHL053) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | 702.000 | 86.000 | 256.000 | YMRP .0000 IN. |
| | | | | | | | ZMRP 375.0000 IN. |
| | | | | | | | SCALE .0100 |

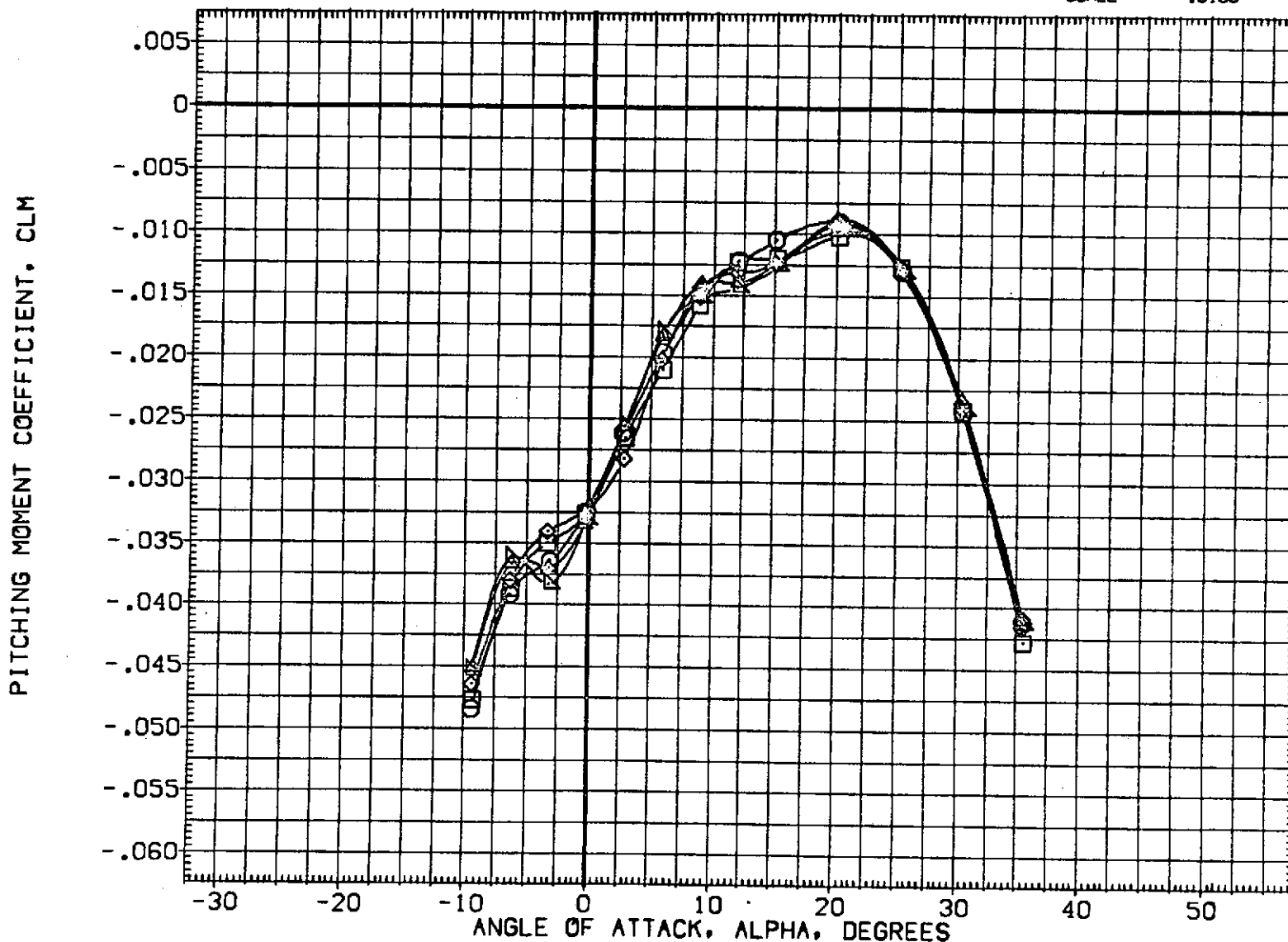


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHLF13) | OA82 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL050) | OA82 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 98.000 | 86.000 | 36.000 | LREF 474.3100 IN. |
| (RHL051) | OA82 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 261.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| (RHL052) | OA82 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 473.000 | 83.000 | 174.000 | XMRF 1076.7000 IN. |
| (RHL053) | OA82 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 702.000 | 86.000 | 258.000 | YMRF .0000 IN. |
| | | | | | | ZMRF 375.0000 IN. |
| | | | | | | SCALE .0100 |

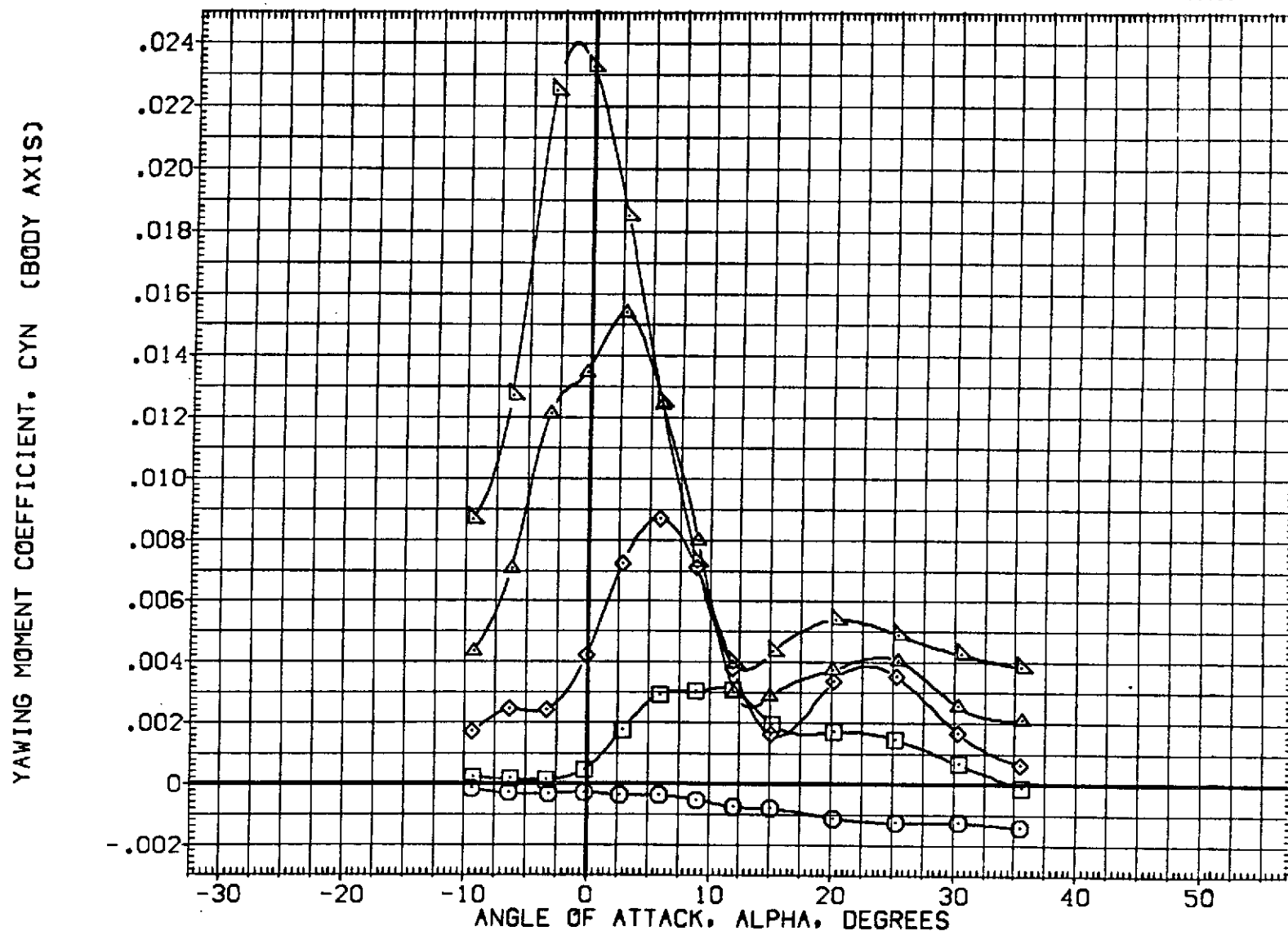


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | RCS OFF | Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | | |
|-----------------|-----------------------------------|---------|---------|---------|--------|---------|-----------------------|-----------|--------|
| (RHLF13) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHL050) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | 99.000 | 86.000 | 36.000 | LREF | 474.8100 | IN. |
| (RHL051) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | 261.000 | 80.000 | 96.000 | BREF | 936.6800 | IN. |
| (RHL052) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 | IN. |
| (RHL053) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) | 125.000 | 702.000 | 86.000 | 258.000 | YMRP | .0000 | IN. |
| | | | | | | | ZMRP | 375.0000 | IN. |
| | | | | | | | SCALE | .0100 | |

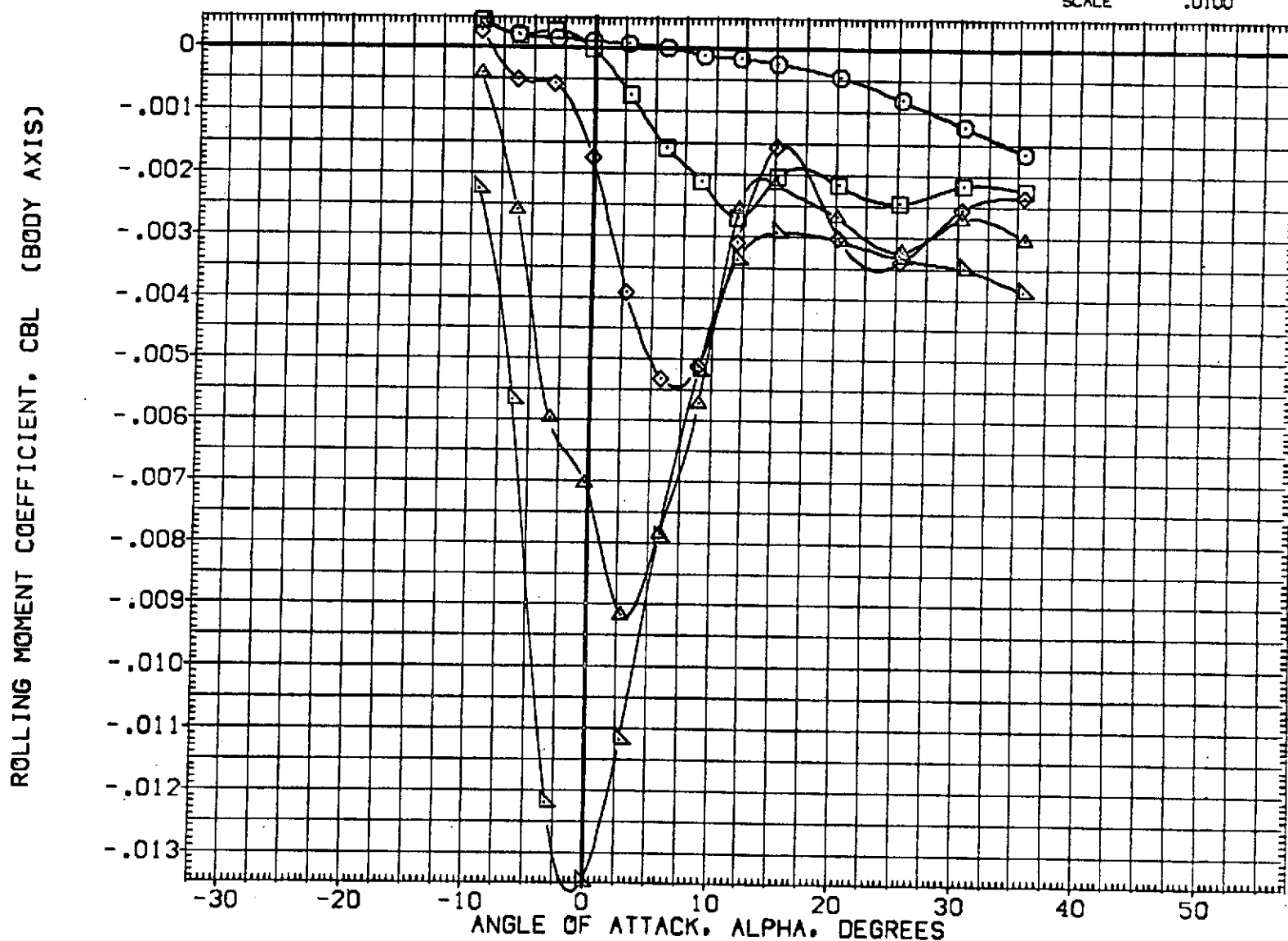


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|--------|---------|-----------------------|------------------|
| (RHLF13) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHL050) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 98.000 | 86.000 | 36.000 | LREF | 474.8100 IN. |
| (RHL051) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 261.000 | 80.000 | 86.000 | SREF | 936.6800 IN. |
| (RHL052) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 473.000 | 83.000 | 174.000 | XMRP | 1076.7000 IN. |
| (RHL053) | 0A82 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 702.000 | 86.000 | 258.000 | YMRP | .0000 IN. |
| | | | | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

NORMAL FORCE COEFFICIENT, CN

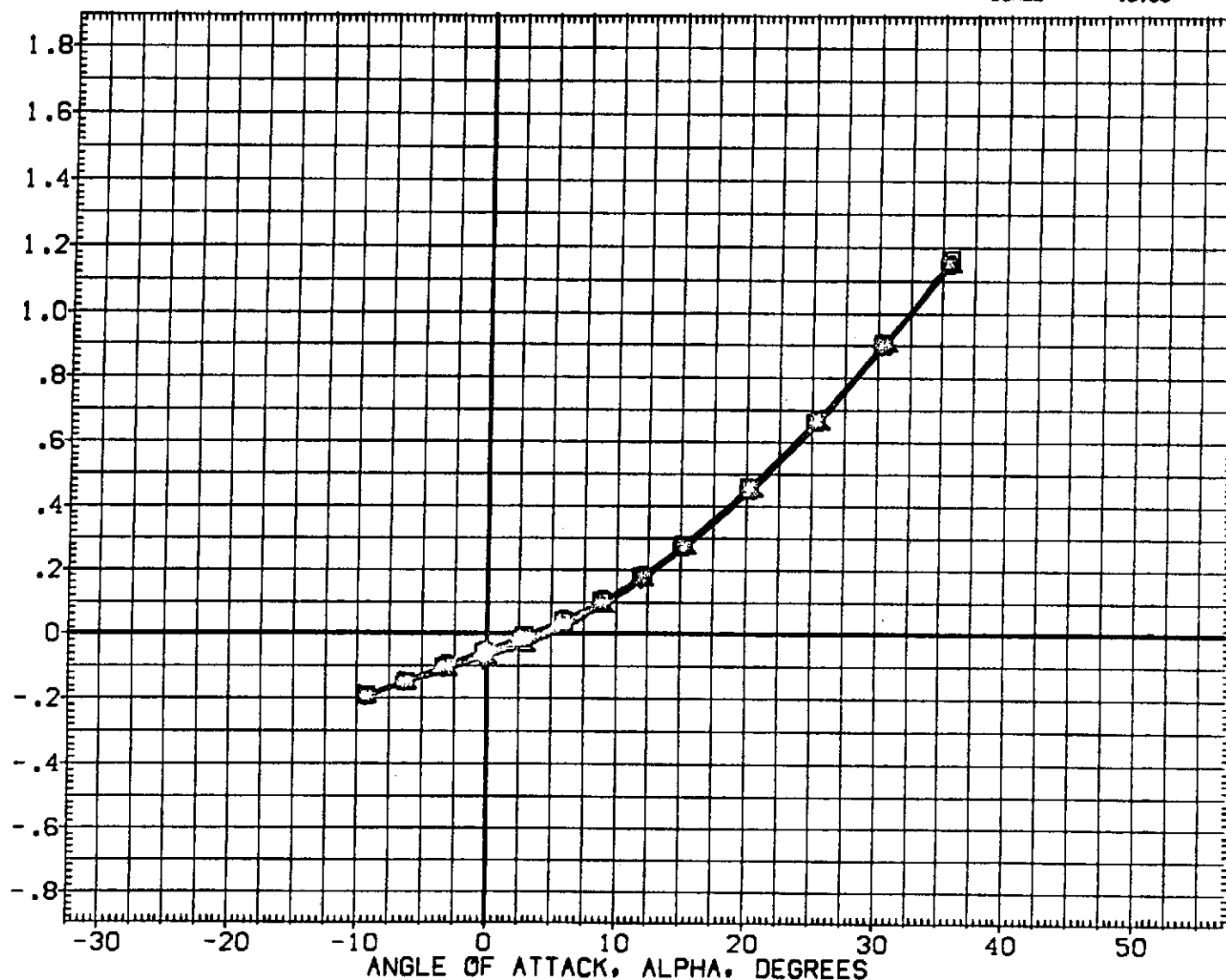


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHLF13) | 0A82 CFHT113 MODEL 32-0 DR8 V/N80 RCS OFF | 125.000 | 98.000 | 86.000 | 36.000 | SREF 2690.0000 SQ.FT. |
| (RHL050) | 0A82 CFHT113 MODEL 32-0 DR8 V/N80 (AIR) | 125.000 | 98.000 | 86.000 | 36.000 | LREF 474.8100 IN. |
| (RHL051) | 0A82 CFHT113 MODEL 32-0 DR8 V/N80 (AIR) | 125.000 | 261.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| (RHL052) | 0A82 CFHT113 MODEL 32-0 DR8 V/N80 (AIR) | 125.000 | 473.000 | 83.000 | 174.000 | XMRP 1076.7000 IN. |
| (RHL053) | 0A82 CFHT113 MODEL 32-0 DR8 V/N80 (AIR) | 125.000 | 702.000 | 86.000 | 258.000 | YMRP .0000 IN. |
| | | | | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

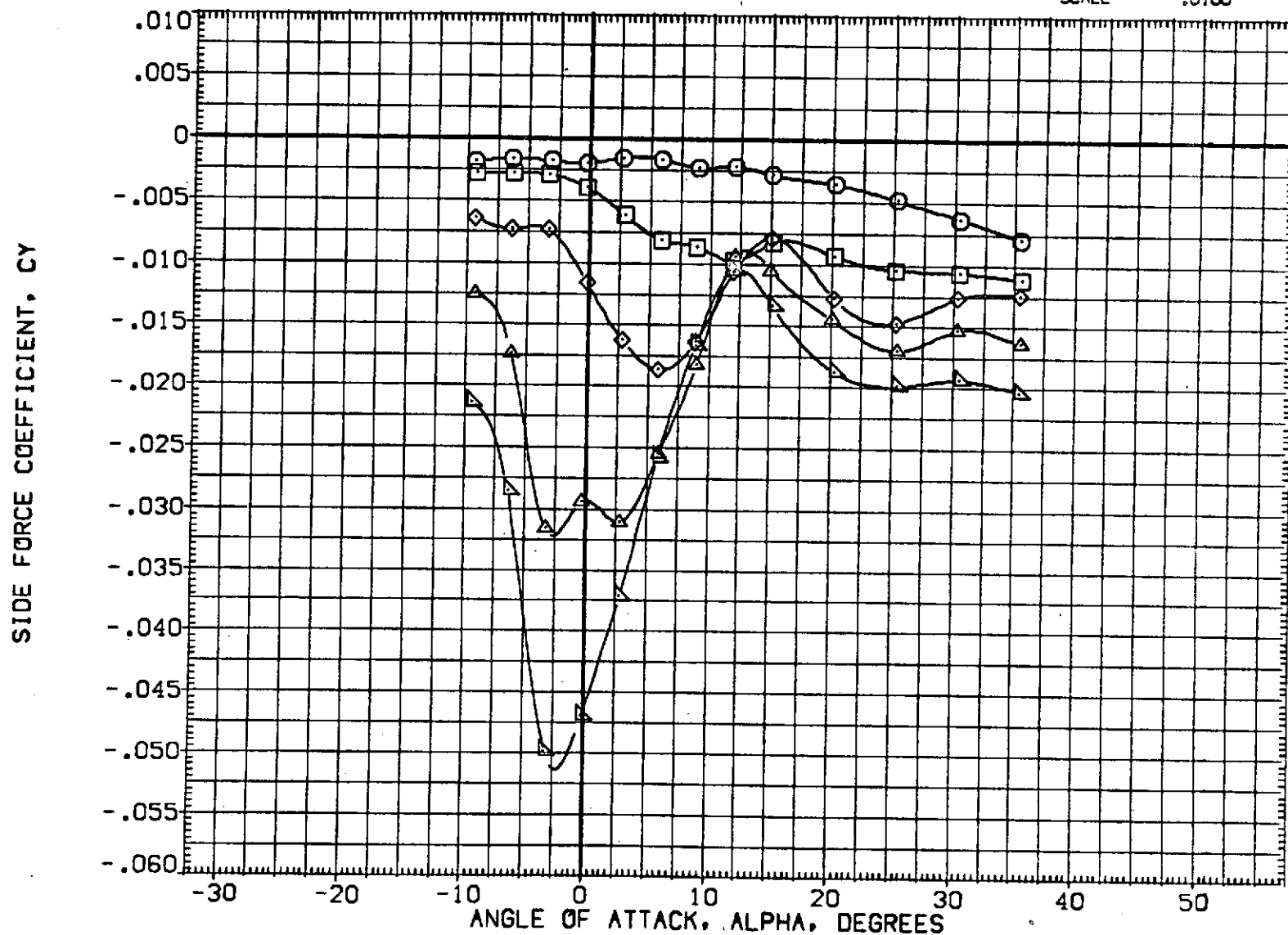


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION |
|-----------------|---|---------|---------|--------|---------|-----------------------|
| (RHLF13) | QAB2 CFHT113 MODEL 32-0 ORB V/N80 RCS OFF | 125.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHL050) | QAB2 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 99.000 | 96.000 | 36.000 | LREF 474.8100 IN. |
| (RHL051) | QAB2 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 261.000 | 80.000 | 96.000 | BREF 936.6800 IN. |
| (RHL052) | QAB2 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 473.000 | 83.000 | 174.000 | XMPP 1076.7000 IN. |
| (RHL053) | QAB2 CFHT113 MODEL 32-0 ORB V/N80 [AIR] | 125.000 | 702.000 | 86.000 | 258.000 | YMPP .0000 IN. |
| | | | | | | ZMPP 375.0000 IN. |
| | | | | | | SCALE .0100 |

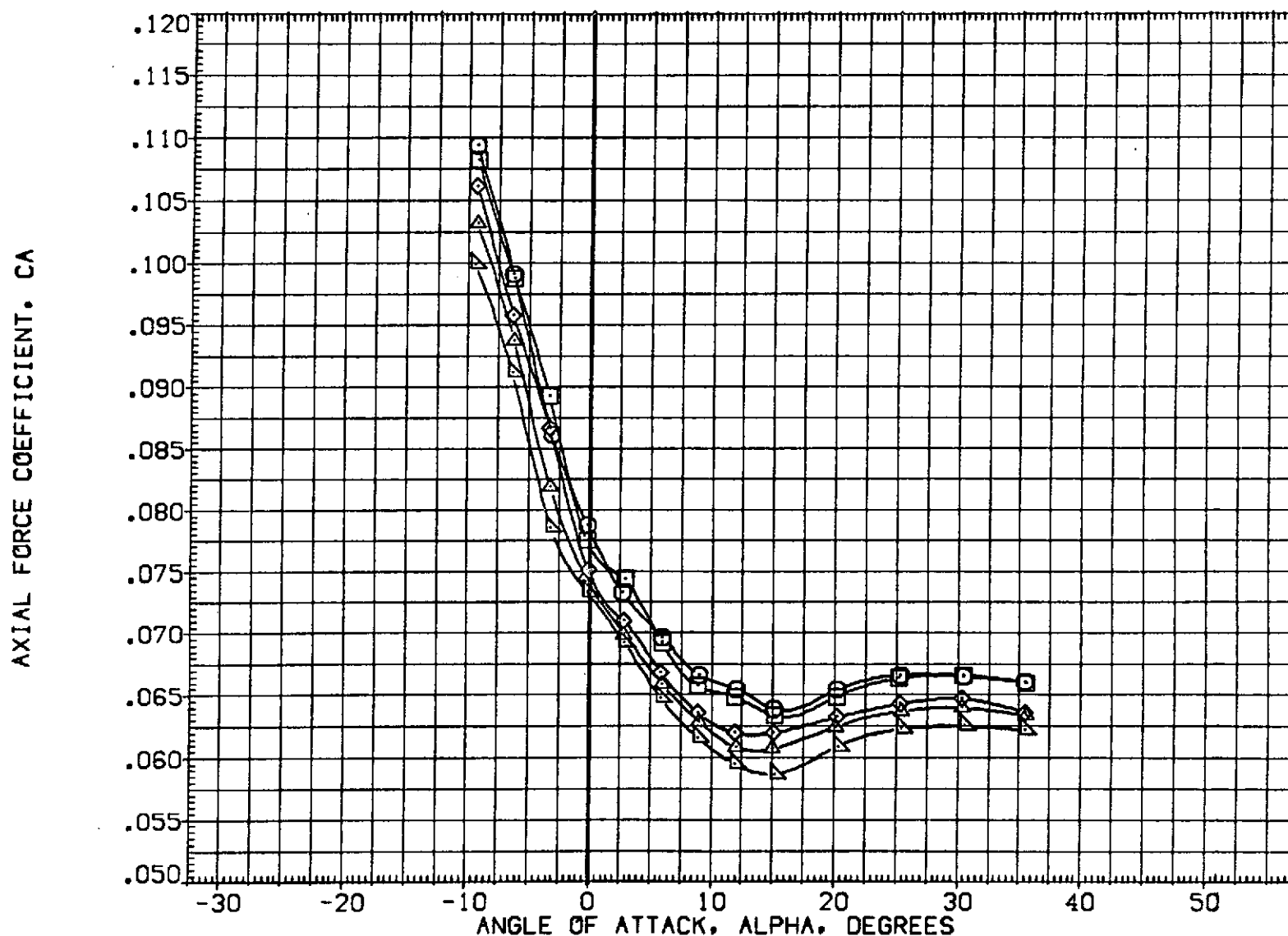


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.32

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC50] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) |
| [CHLC51] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) |
| [CHLC52] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) |
| [CHLC53] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 98.000 | 86.000 | 36.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | BREF | 936.6800 IN. |
| 125.000 | 702.000 | 86.000 | 258.000 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

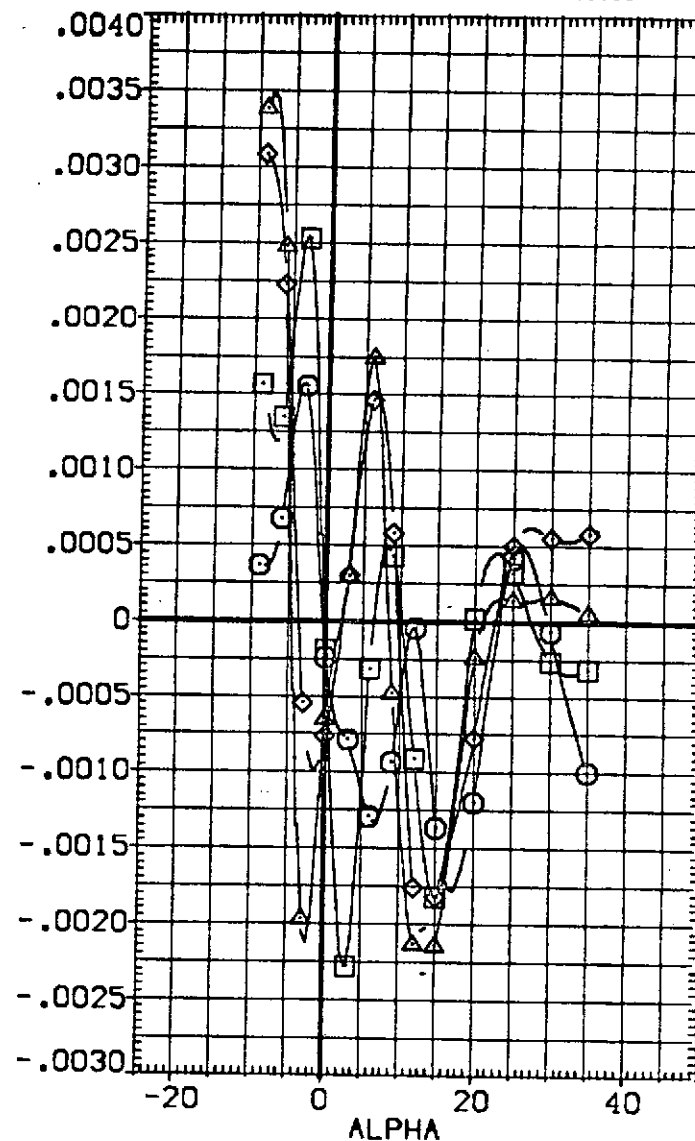
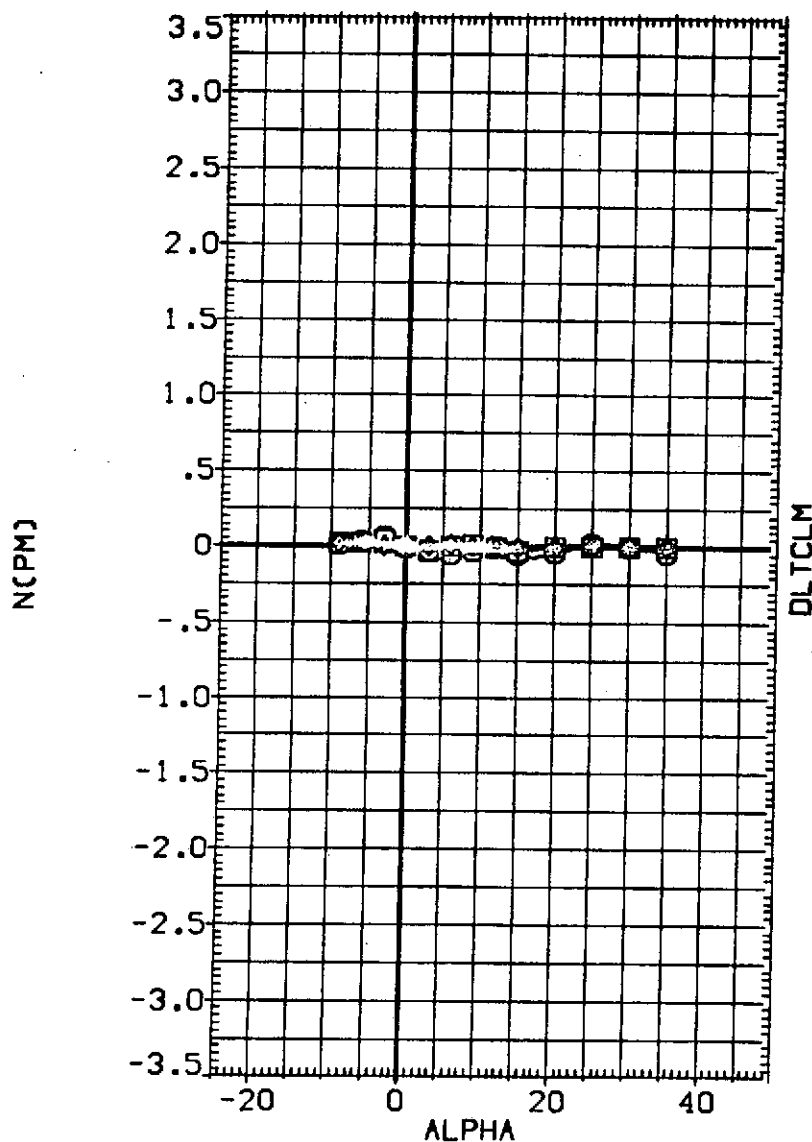


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | |
|-----------------|-----------------------------------|-------|
| [CHLC50] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) |
| [CHLC51] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) |
| [CHLC52] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) |
| [CHLC53] | 0A82 CFHT113 MODEL 32-0 ORB V/N80 | (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 98.000 | 86.000 | 36.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | BREF | 936.5800 IN. |
| 125.000 | 702.000 | 86.000 | 258.000 | XMRF | 1076.7000 IN. |
| | | | | YMRF | .0000 IN. |
| | | | | ZMRF | 375.0000 IN. |
| | | | | SCALE | .0100 |

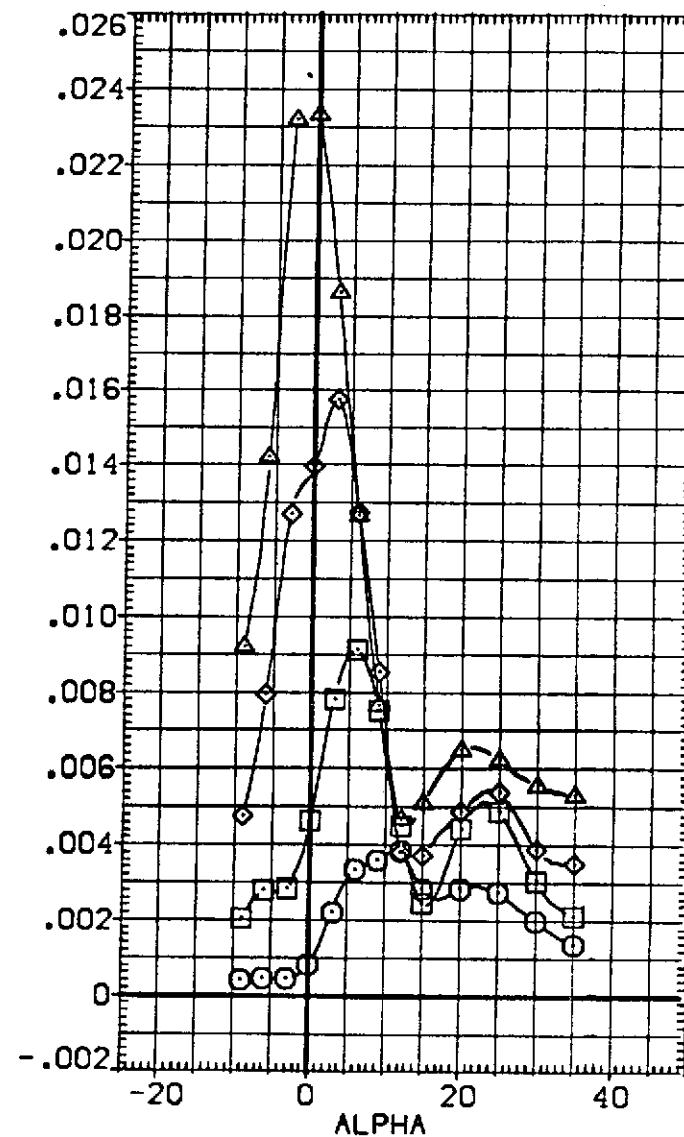
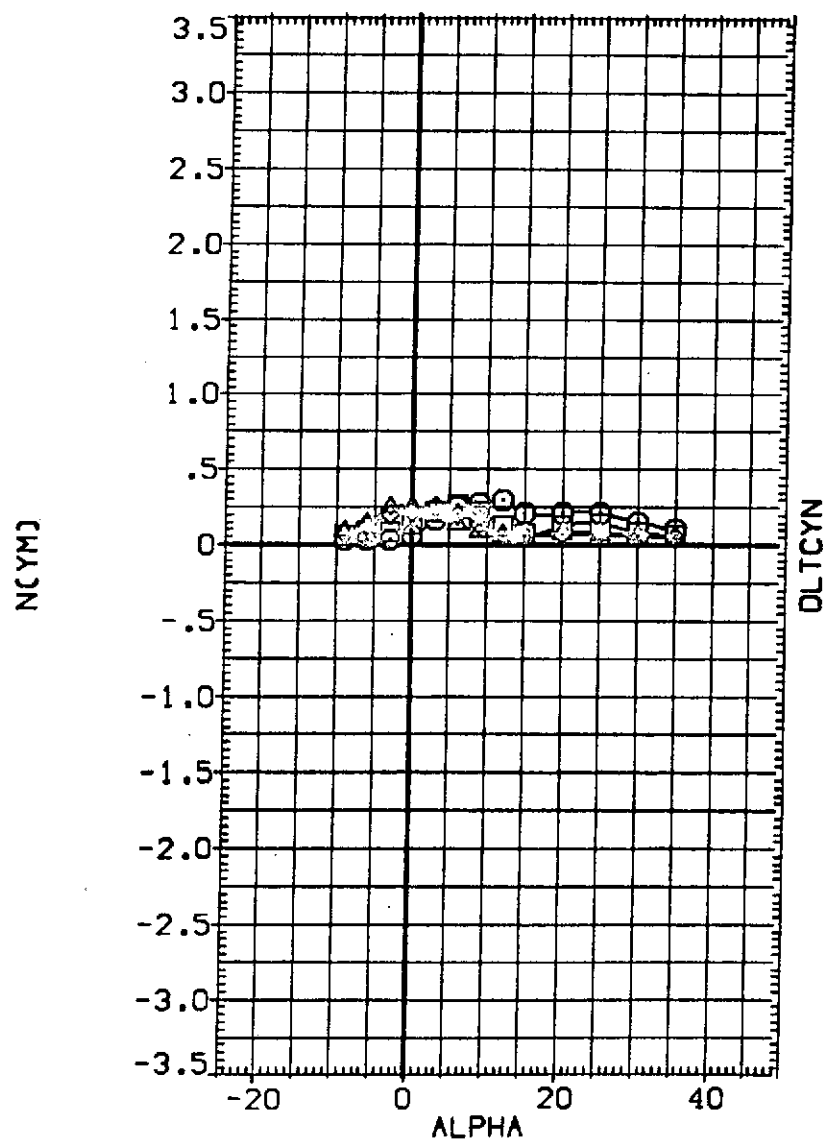


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, $Q(PSF) = 125$ ON AERO CHARACTER
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLC50) | ○ ○A82 CFHT113 MODEL 32-0 OR8 V/N80 (AIR) |
| (CHLC51) | □ ○A82 CFHT113 MODEL 32-0 OR8 V/N80 (AIR) |
| (CHLC52) | △ ○A82 CFHT113 MODEL 32-0 OR8 V/N80 (AIR) |
| (CHLC53) | △ ○A82 CFHT113 MODEL 32-0 OR8 V/N80 (AIR) |

| Q(PSF) | PORES | TCRCS | T/QA | REFERENCE INFORMATION | | |
|---------|---------|--------|---------|-----------------------|-----------|---------|
| 125.000 | 99.000 | 86.000 | 36.000 | SREF | 2690.0000 | 50. FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF | 474.8100 | IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | BREF | 936.6800 | IN. |
| 125.000 | 702.000 | 86.000 | 258.000 | XMRP | 1076.7000 | IN. |
| | | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

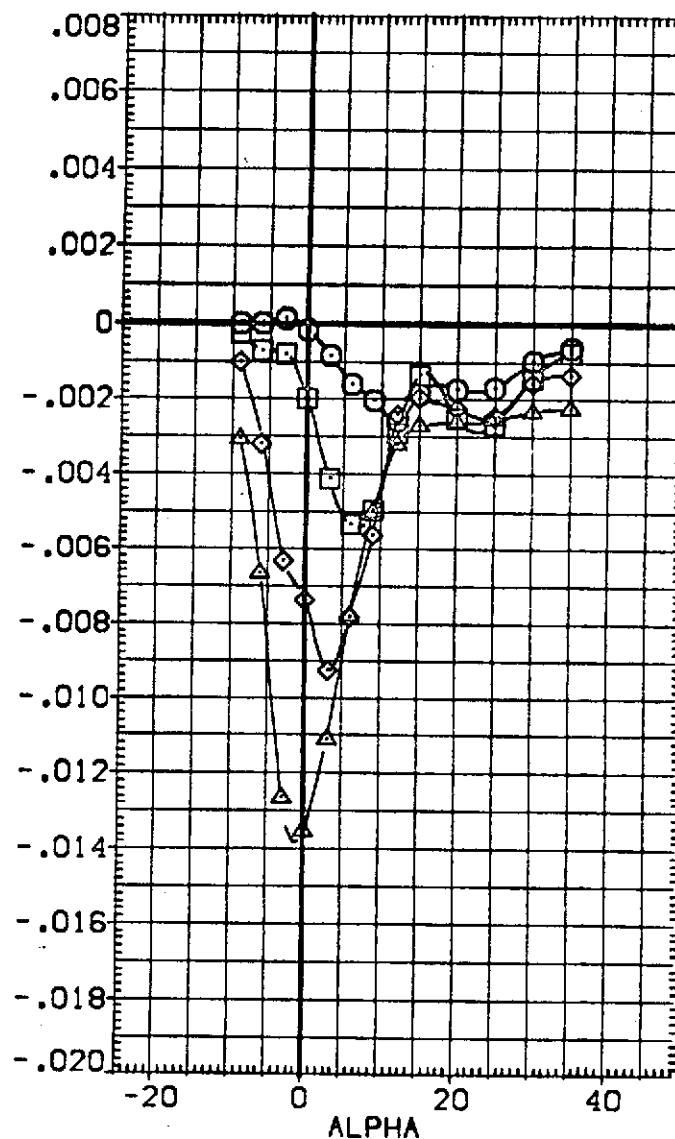
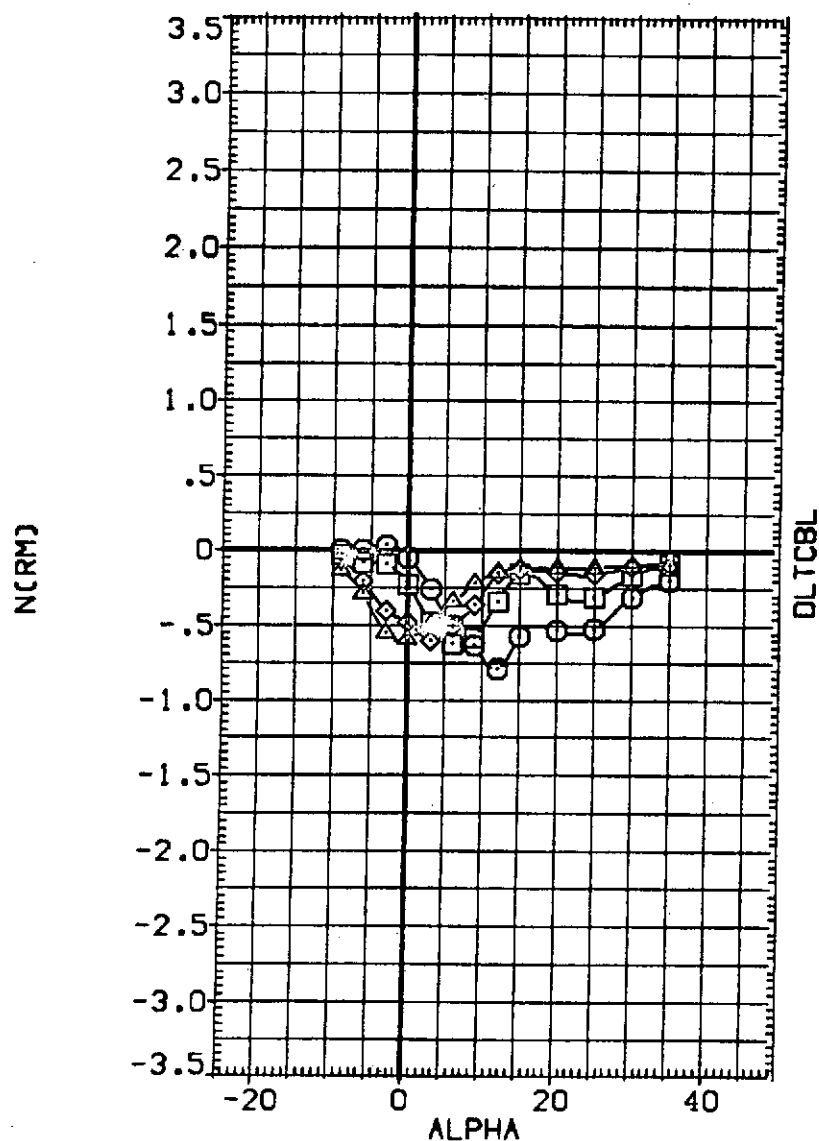


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLC50] | DA82 CFHT113 MODEL 32-0 ORB V/N80 (AIR) |
| [CHLC51] | DA82 CFHT113 MODEL 32-0 ORB V/N80 (AIR) |
| [CHLC52] | DA82 CFHT113 MODEL 32-0 ORB V/N80 (AIR) |
| [CHLC53] | DA82 CFHT113 MODEL 32-0 ORB V/N80 (AIR) |

| Q(PSF) | PCRC | TCRC | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 98.000 | 86.000 | 36.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | BREF | 936.6800 IN. |
| 125.000 | 702.000 | 66.000 | 258.000 | XMRF | 1076.7000 IN. |
| | | | | YMRF | .0000 IN. |
| | | | | ZMRF | 375.0000 IN. |
| | | | | SCALE | .0100 |

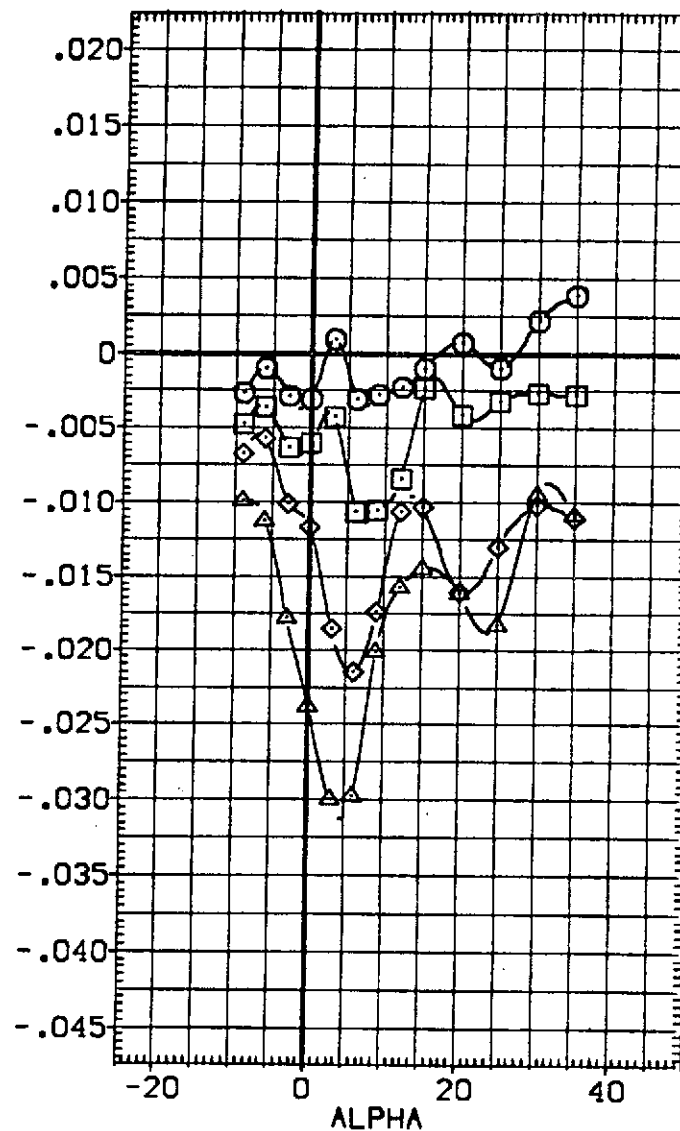
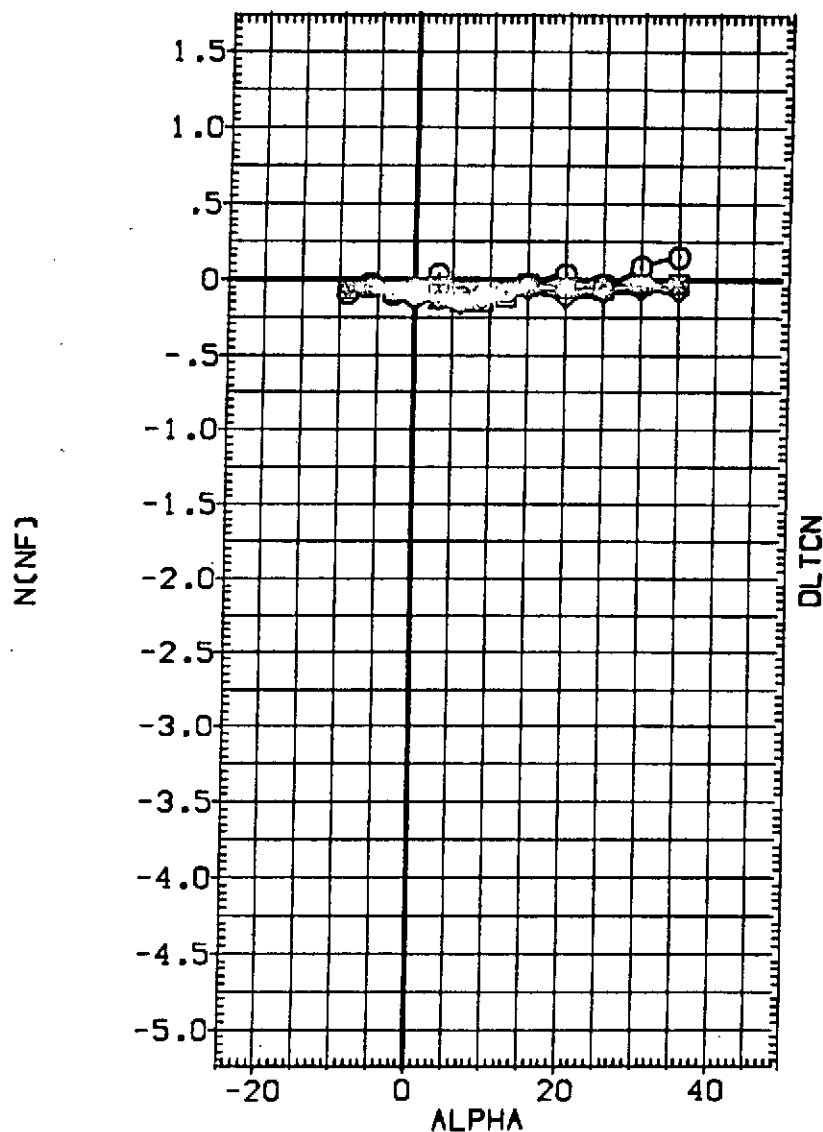


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, Q(PSF)= 125 ON AERO CHARACT

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLCS0) | 0A82 CFHT113 MODEL 32-0 OR8 V/N80 (AIR) |
| (CHLCS1) | 0A82 CFHT113 MODEL 32-0 OR8 V/N80 (AIR) |
| (CHLCS2) | 0A82 CFHT113 MODEL 32-0 OR8 V/N80 (AIR) |
| (CHLCS3) | 0A82 CFHT113 MODEL 32-0 OR8 V/N80 (AIR) |

| Q(PSF) | PC RCS | TC RCS | T/QA | REFERENCE INFORMATION | |
|---------|---------|--------|---------|-----------------------|------------------|
| 125.000 | 99.000 | 86.000 | 36.000 | SREF | 2690.0000 SQ.FT. |
| 125.000 | 261.000 | 80.000 | 96.000 | LREF | 474.8100 IN. |
| 125.000 | 473.000 | 83.000 | 174.000 | BREF | 936.6800 IN. |
| 125.000 | 702.000 | 86.000 | 258.000 | XM RP | 1076.7000 IN. |
| | | | | YM RP | .0000 IN. |
| | | | | ZM RP | 375.0000 IN. |
| | | | | SCALE | .0100 |

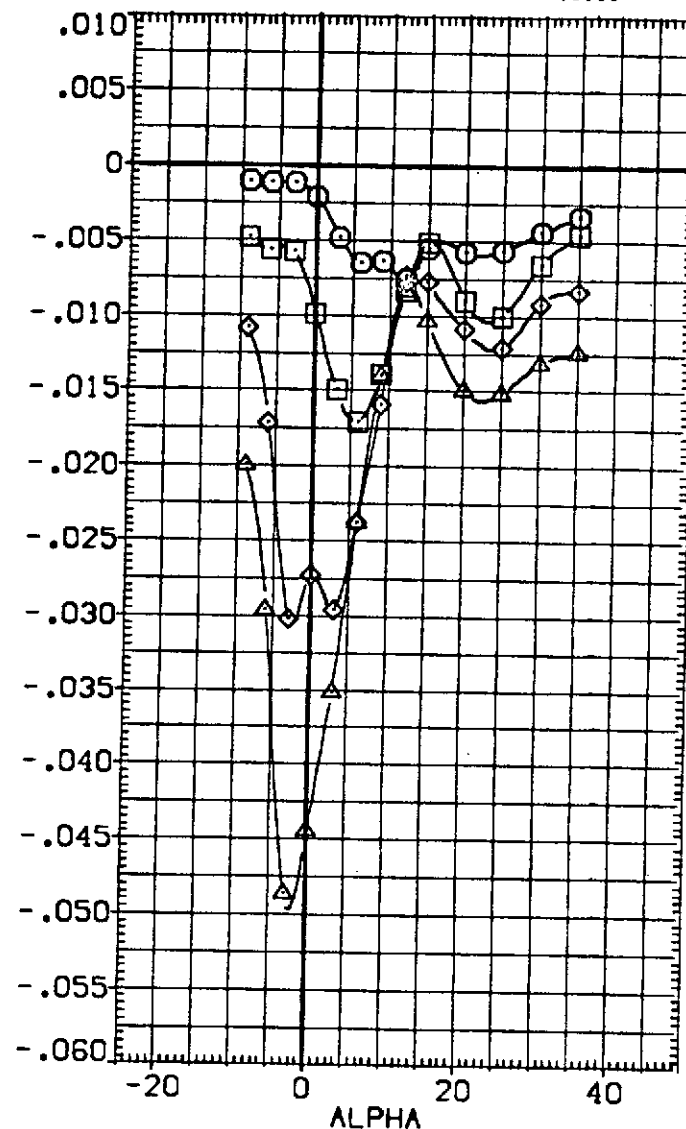
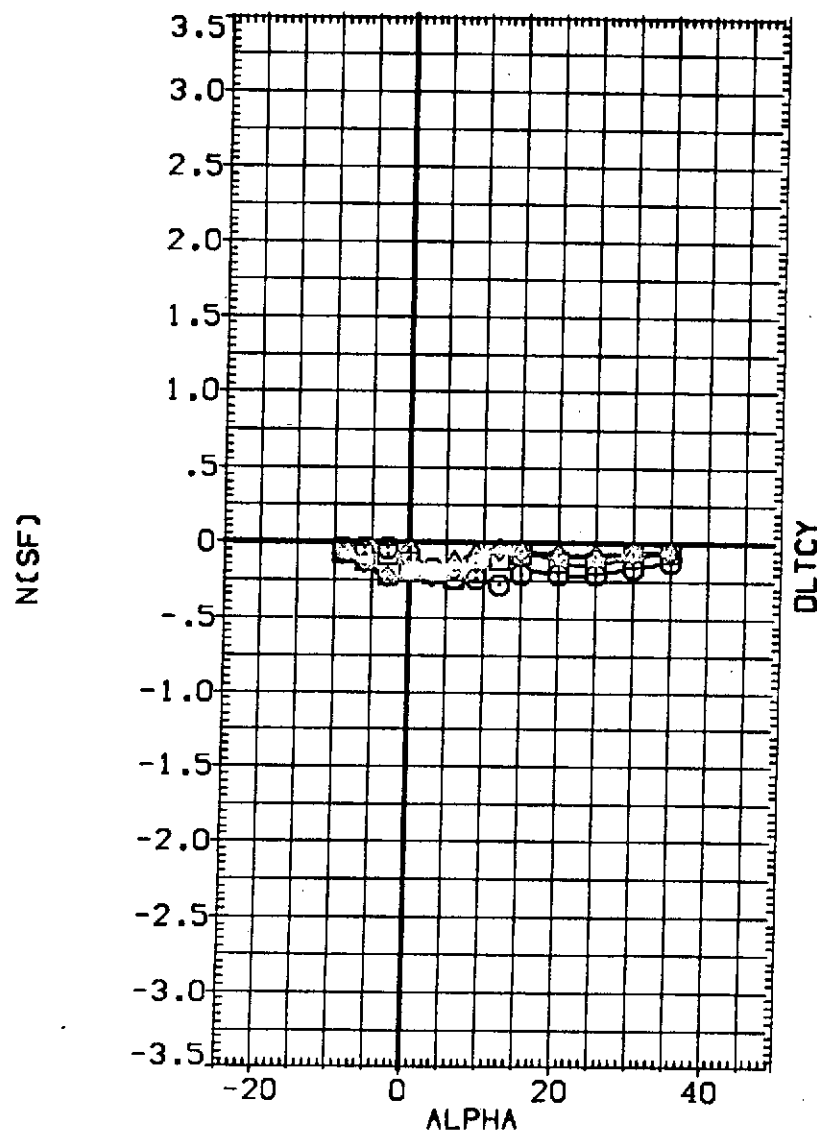


FIG. 29 EFFECT OF T/QA USING AIR WITH N80 JETS, $Q(PSF) = 125$ ON AERO CHARACT

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | PCTHE | PCTAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| [RHLF04] | 0A82 CFHT113 MODEL 32-0 CRB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| [RHLM09] | 0A82 CFHT113 MODEL 32-0 CRB V/N49 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 | IN. |
| [RHLM00] | 0A82 CFHT113 MODEL 32-0 CRB V/N49 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.6800 | IN. |
| [RHLM07] | 0A82 CFHT113 MODEL 32-0 CRB V/N49 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| [RHLM04] | 0A82 CFHT113 MODEL 32-0 CRB V/N49 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| [RHLM01] | 0A82 CFHT113 MODEL 32-0 CRB V/N49 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

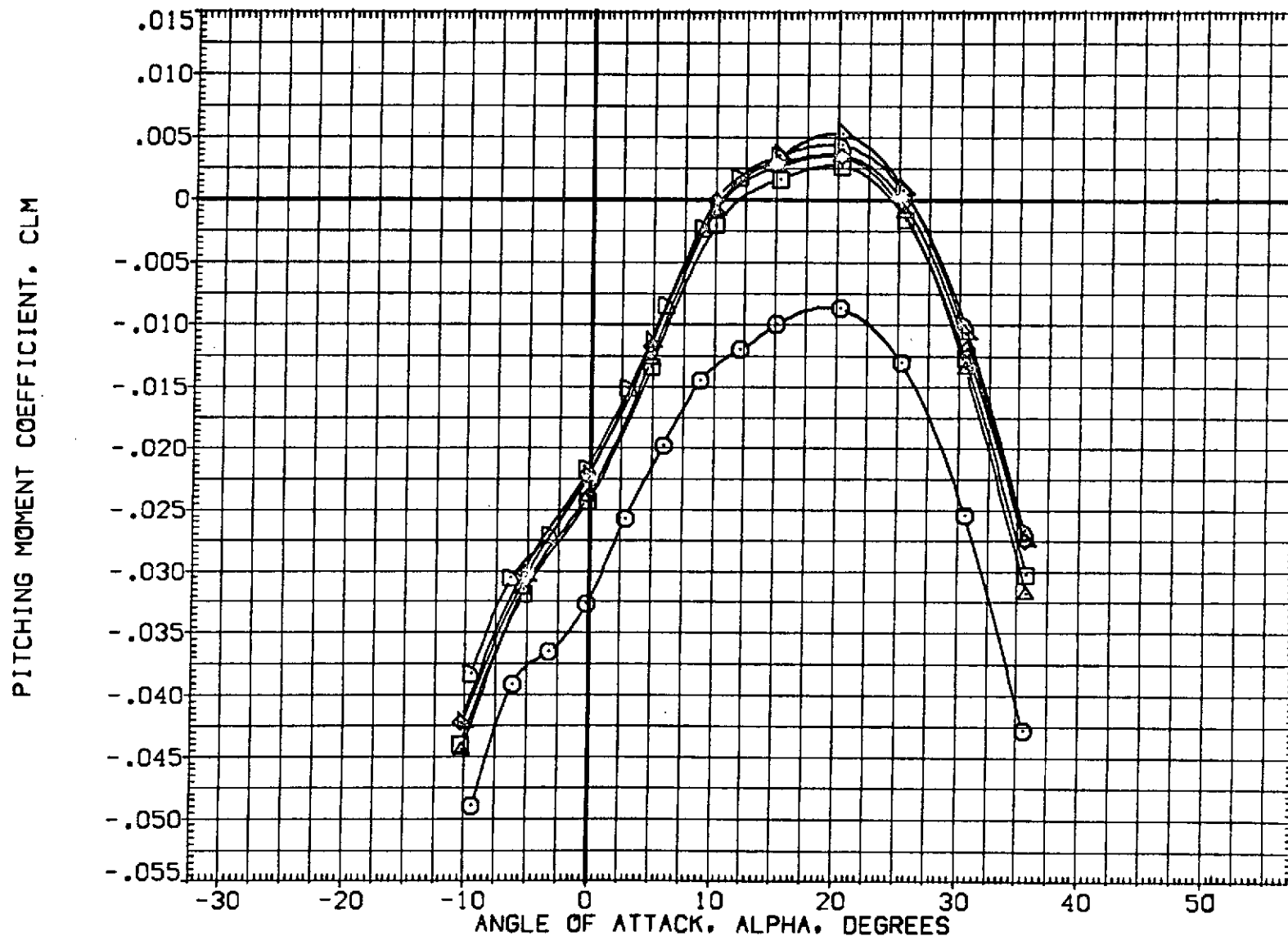


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCPCS | PCTHE | PCFAR | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|---------|---------|-----------------------|------------------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHLM09) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 IN. |
| (RHLM00) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.6800 IN. |
| (RHLM07) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 IN. |
| (RHLM04) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 IN. |
| (RHL001) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 [AIR] | 150.000 | 155.000 | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

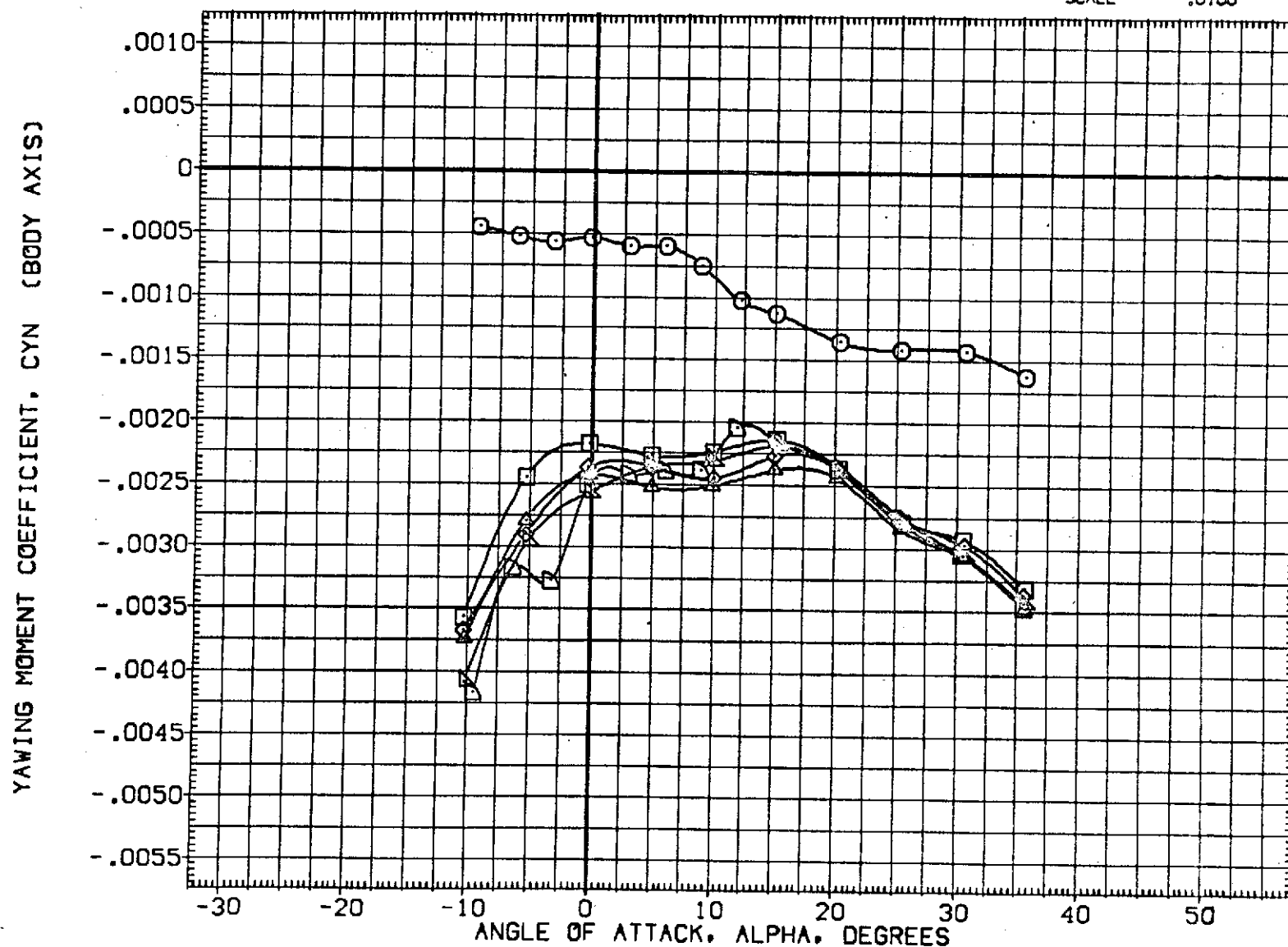


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | PCTHE | PCTAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLFO4) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | 100.000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHLMO9) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 | IN. |
| (RHLMO0) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.6800 | IN. |
| (RHLMO7) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| (RHLMO4) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| (RHLMO1) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

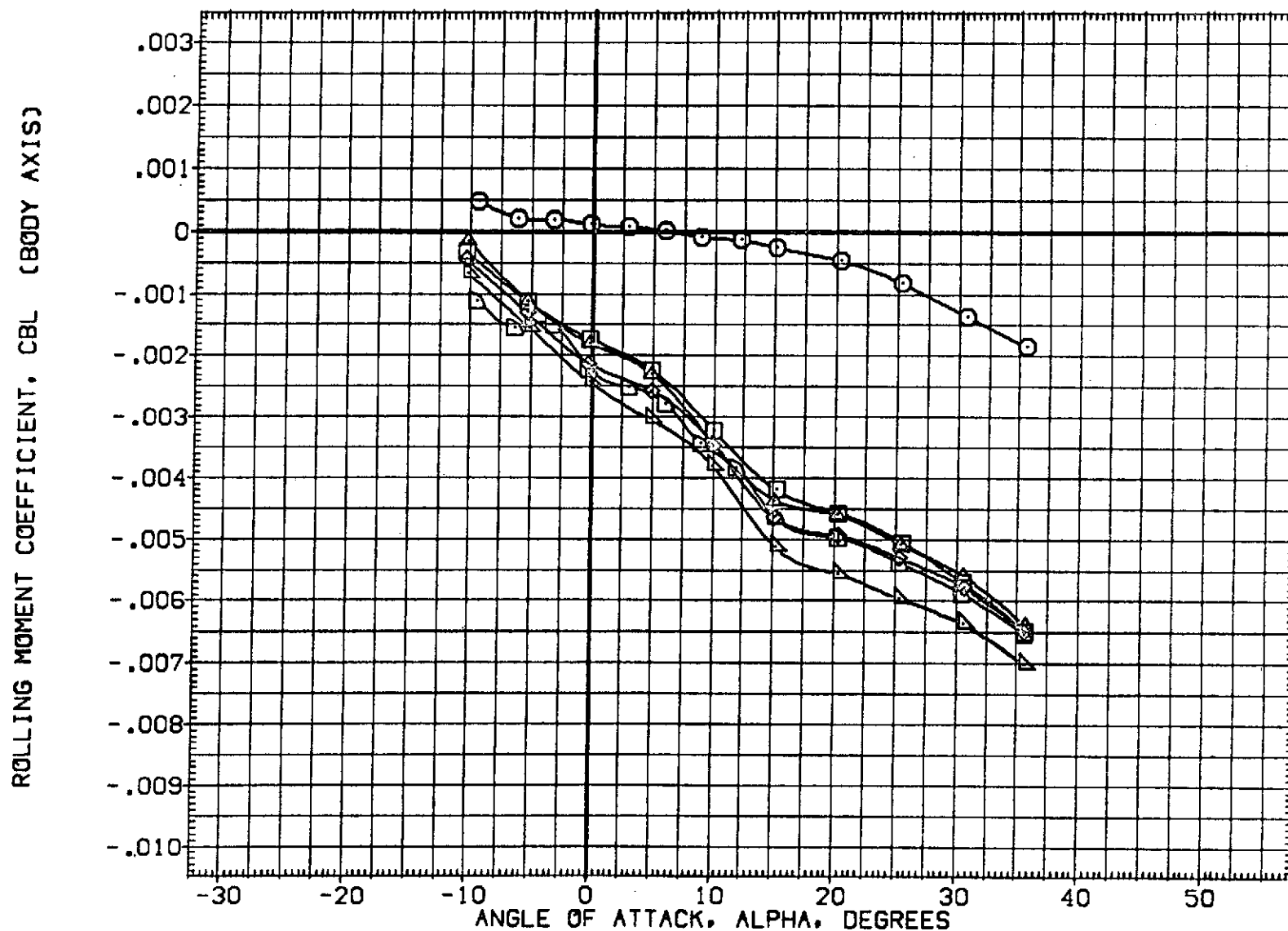


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | PCTH | PCTAR | REFERENCE INFORMATION |
|-----------------|---|---------|---------|---------|---------|-----------------------|
| (RHLFO4) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2690.0000 SQ.FT. |
| (RHLMO9) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF 474.8100 IN. |
| (RHLMO0) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF 936.6800 IN. |
| (RHLMO7) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP 1076.7000 IN. |
| (RHLMO4) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP .0000 IN. |
| (RHLMO1) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) | 150.000 | 155.000 | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

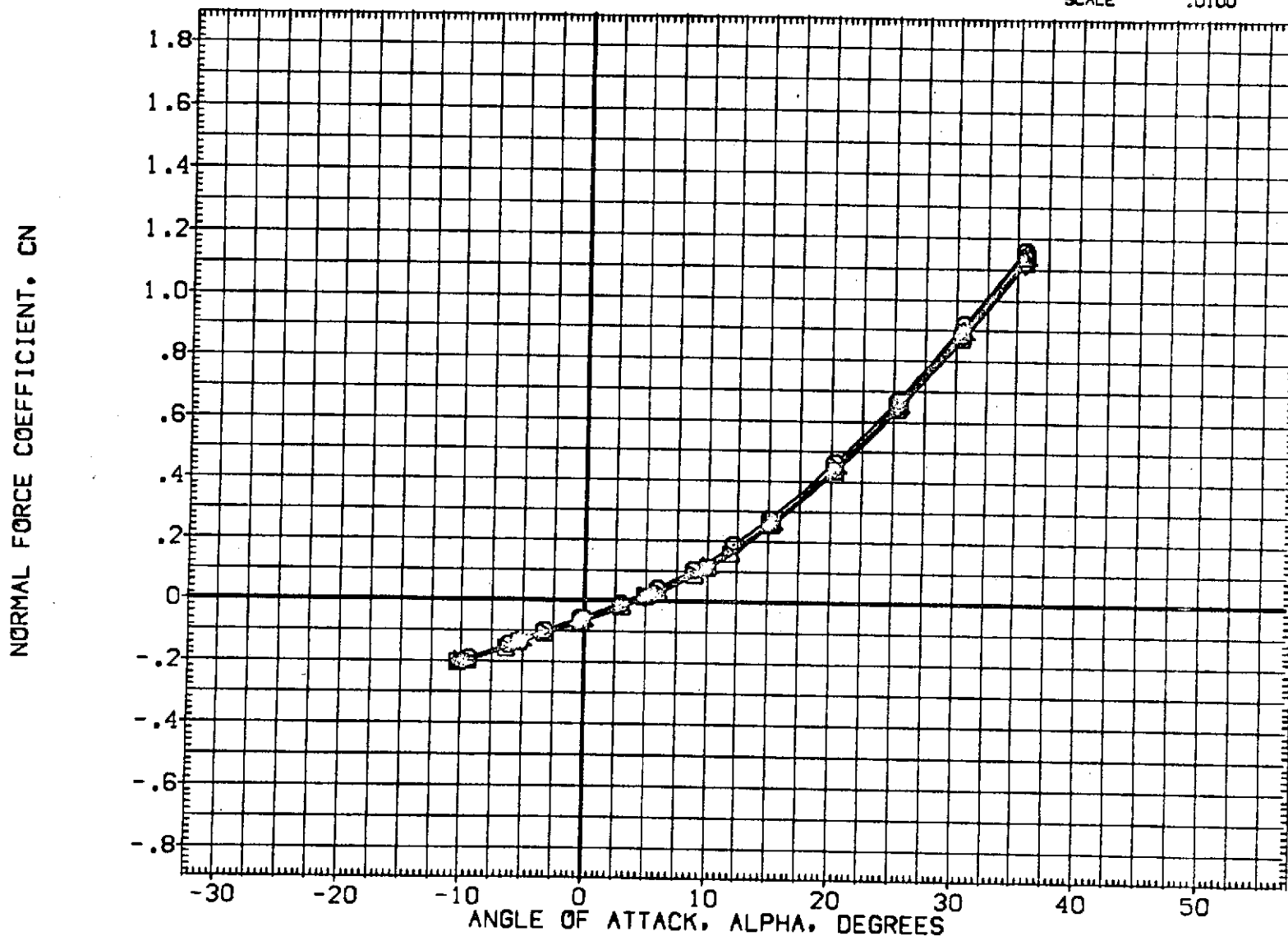


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRS | PCTHE | PCTAR | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|---------|---------|-----------------------|------------------|
| [RHLFD4] | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| [RHLMO9] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (MIXED GAS) | 150.000 | 159.000 | 100.000 | .000 | LREF | 474.8100 IN. |
| [RHLMO0] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.6800 IN. |
| [RHLMO7] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 IN. |
| [RHLMO4] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 IN. |
| [RHLMO1] | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

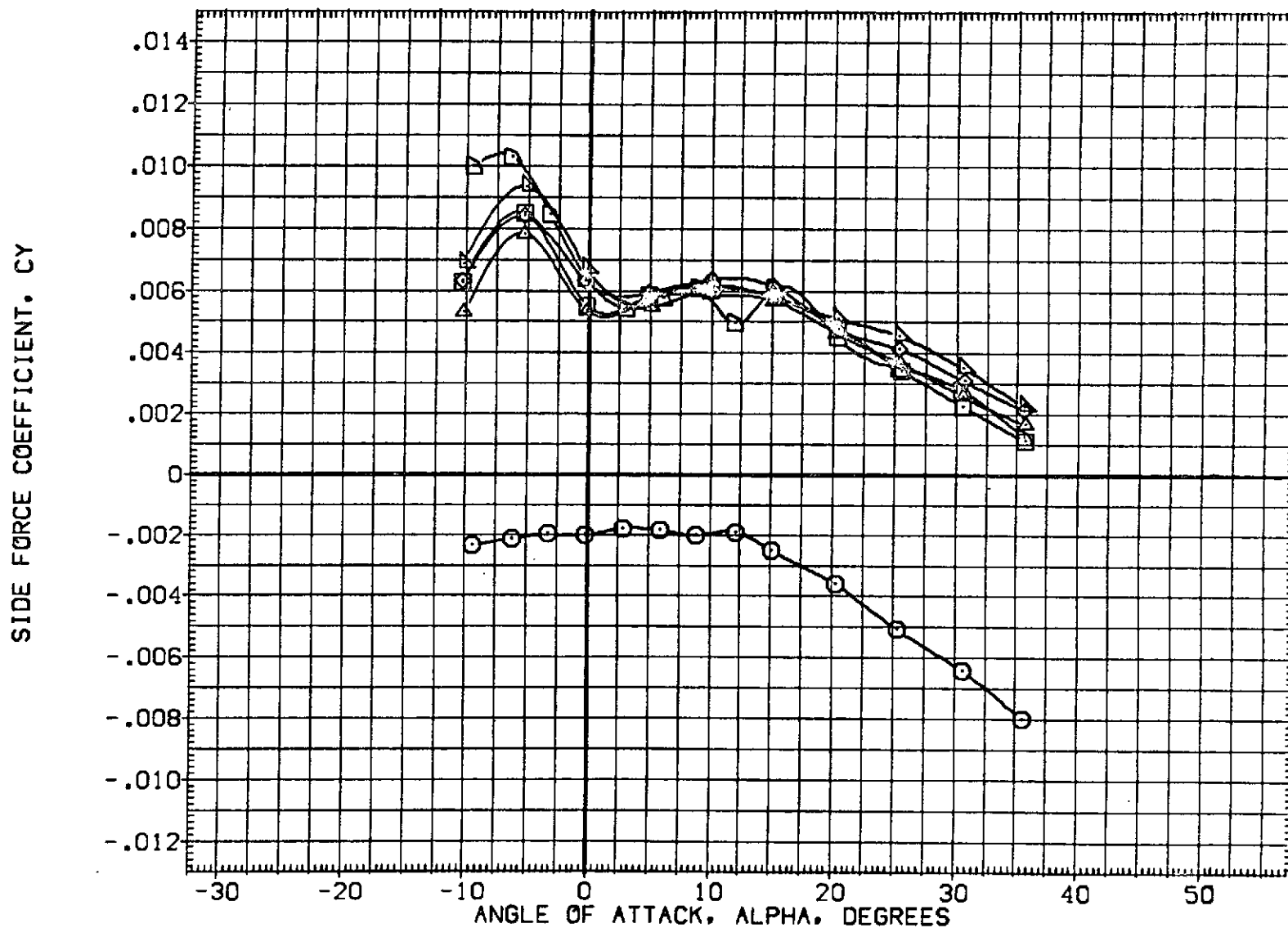


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | PC THE | PC TAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLFO4) | QAB2 CFHT113 MODEL 32-0 DRB W/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHLMO9) | QAB2 CFHT113 MODEL 32-0 DRB W/N49 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 | IN. |
| (RHLMO0) | QAB2 CFHT113 MODEL 32-0 DRB W/N49 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.6800 | IN. |
| (RHLMO7) | QAB2 CFHT113 MODEL 32-0 DRB W/N49 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| (RHLMO4) | QAB2 CFHT113 MODEL 32-0 DRB W/N49 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| (RHLMO1) | QAB2 CFHT113 MODEL 32-0 DRB W/N49 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

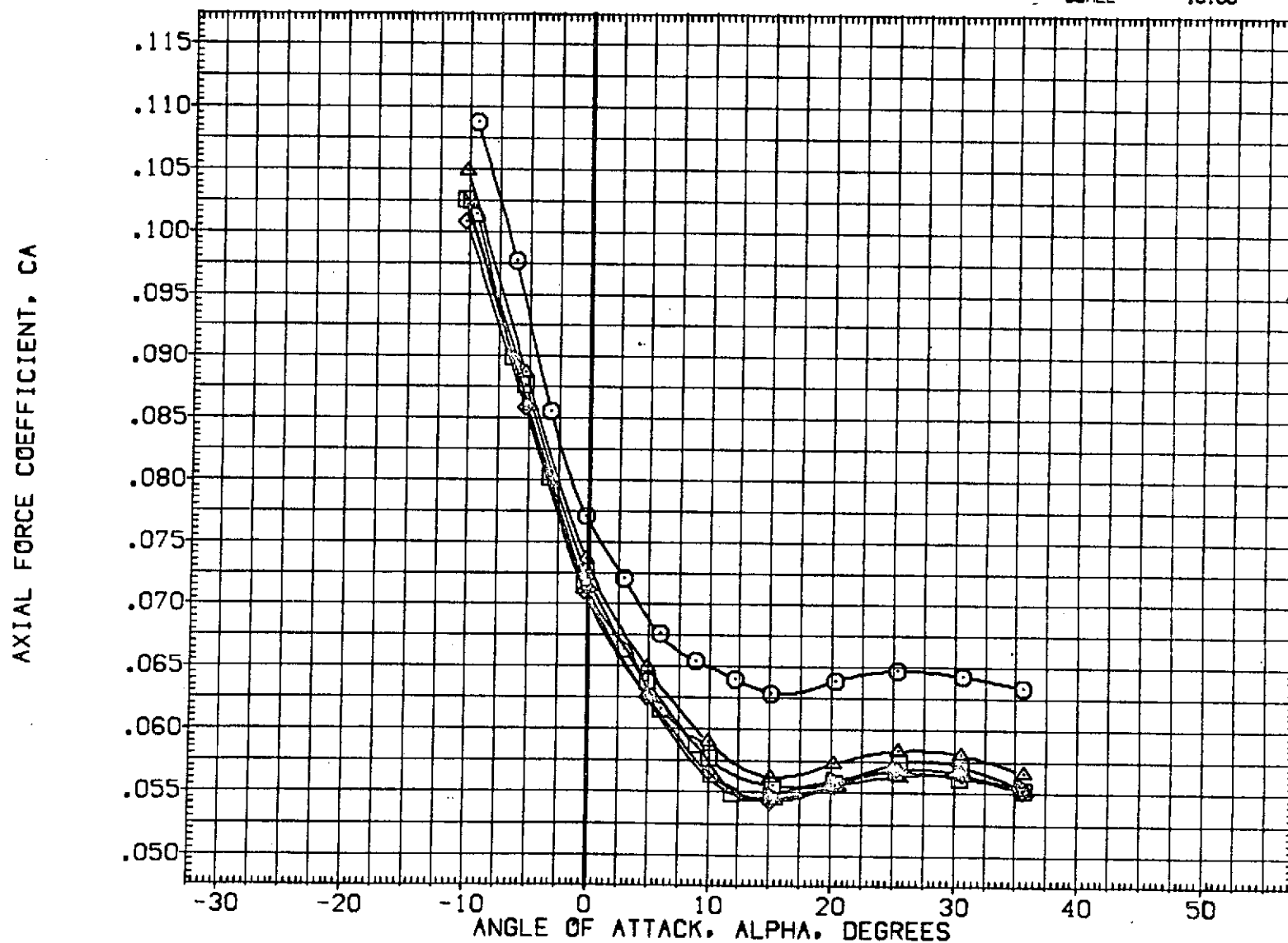


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLD09) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (MIXED GAS) |
| (CHLD00) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (MIXED GAS) |
| (CHLD07) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (MIXED GAS) |
| (CHLD04) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (MIXED GAS) |
| (CHLD01) | 0A82 CFHT113 MODEL 32-0 OR8 V/N49 (AIR) |

| Q(PSF) | PCROSS | PCHE | PCTAR | REFERENCE INFORMATION | |
|---------|---------|---------|---------|-----------------------|------------------|
| 150.000 | 159.000 | 100.000 | .000 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF | 471.8100 IN. |
| 150.000 | 159.000 | 85.000 | 15.000 | BREF | 933.6800 IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRP | 1076.7000 IN. |
| | | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

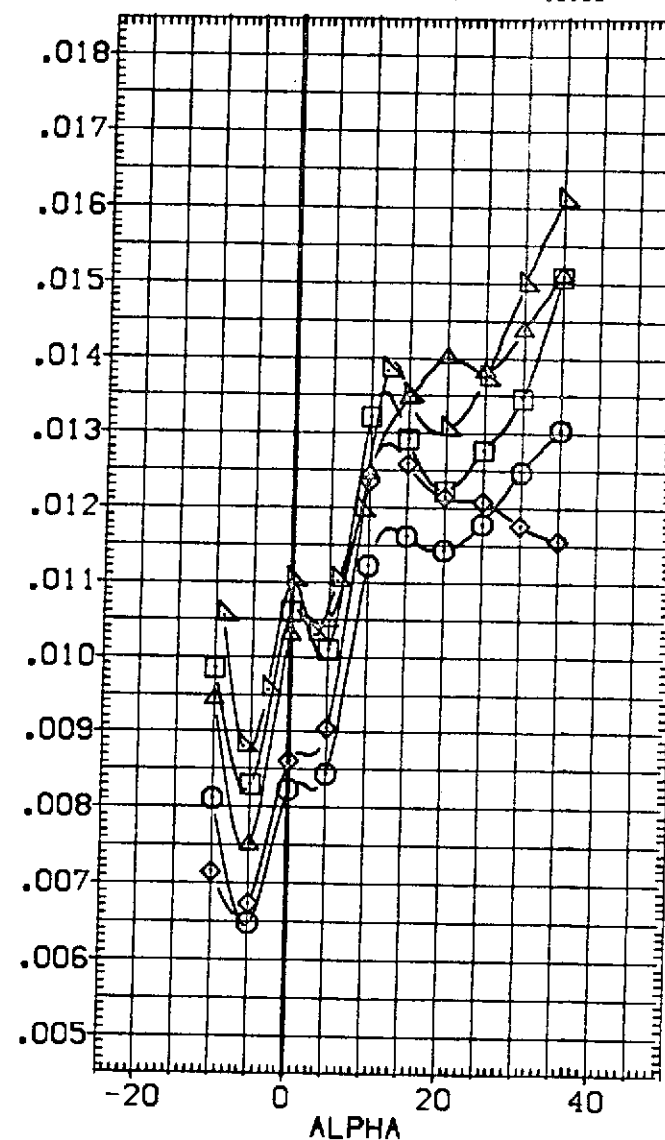
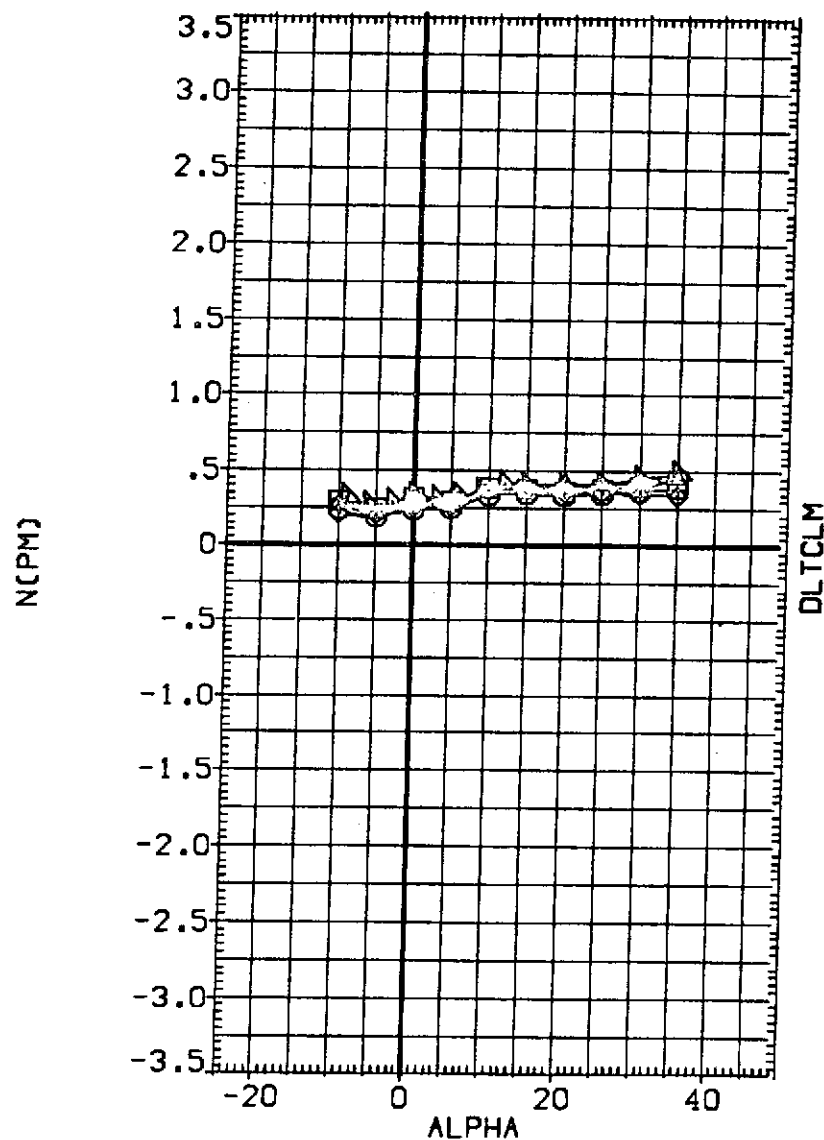


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| {CHLD09} | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| {CHLD00} | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| {CHLD07} | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| {CHLD04} | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| {CHLC01} | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PCRC | PCTH | PCTAR | REFERENCE INFORMATION | |
|---------|---------|---------|---------|-----------------------|------------------|
| 150.000 | 158.000 | 100.000 | .000 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF | 474.8100 IN. |
| 150.000 | 158.000 | 85.000 | 15.000 | BREF | 936.6800 IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRP | 1076.7000 IN. |
| 150.000 | 155.000 | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

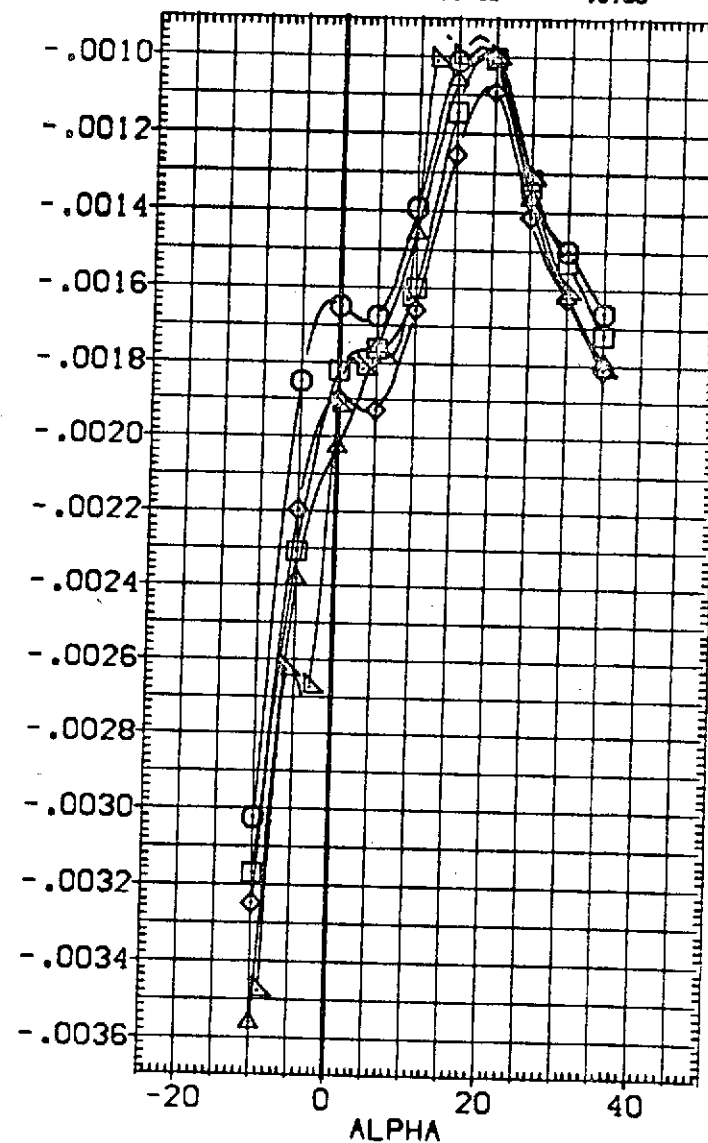
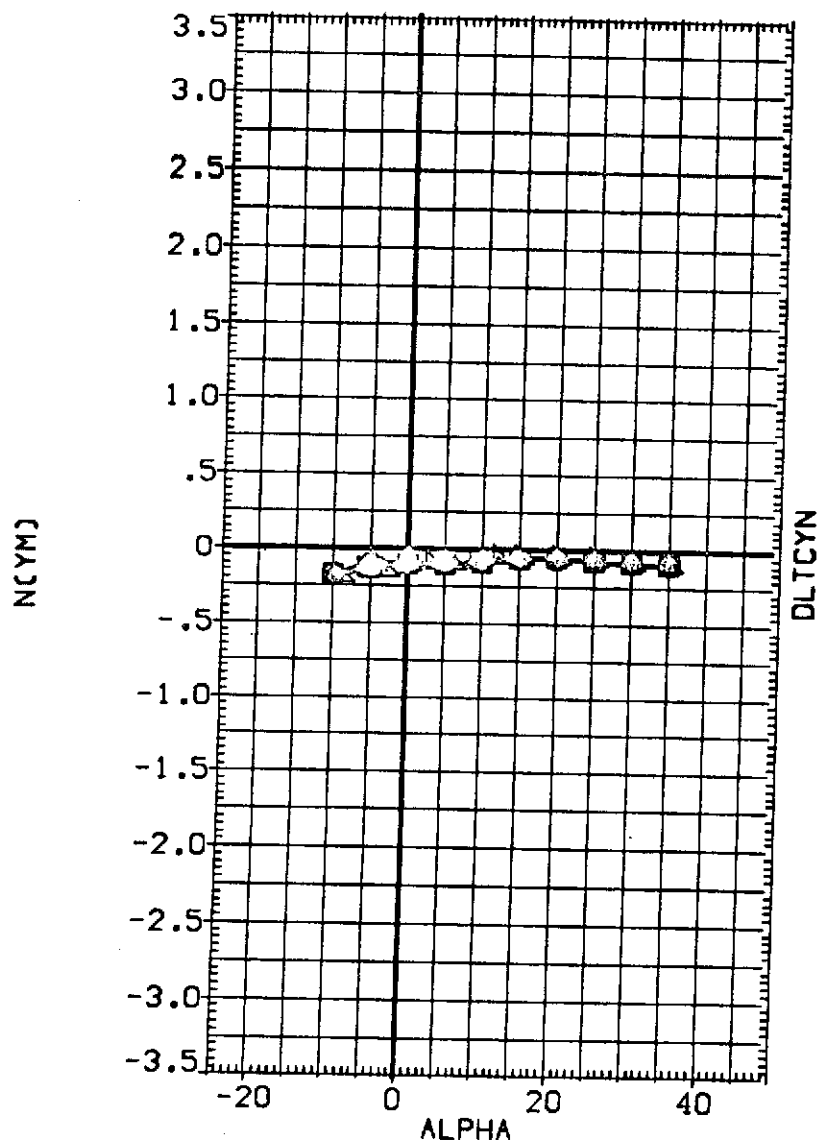


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLD09) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| (CHLD00) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| (CHLD07) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| (CHLD04) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| (CHLD01) | 0A82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PCRS | PCHE | PCTAR | REFERENCE INFORMATION | | |
|---------|---------|---------|---------|-----------------------|-----------|--------|
| 150.000 | 158.000 | 100.000 | .000 | SREF | 2690.0000 | 50.FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF | 474.8100 | IN. |
| 150.000 | 158.000 | 85.000 | 15.000 | BREF | 936.6800 | IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRP | 1076.7000 | IN. |
| 150.000 | 155.000 | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

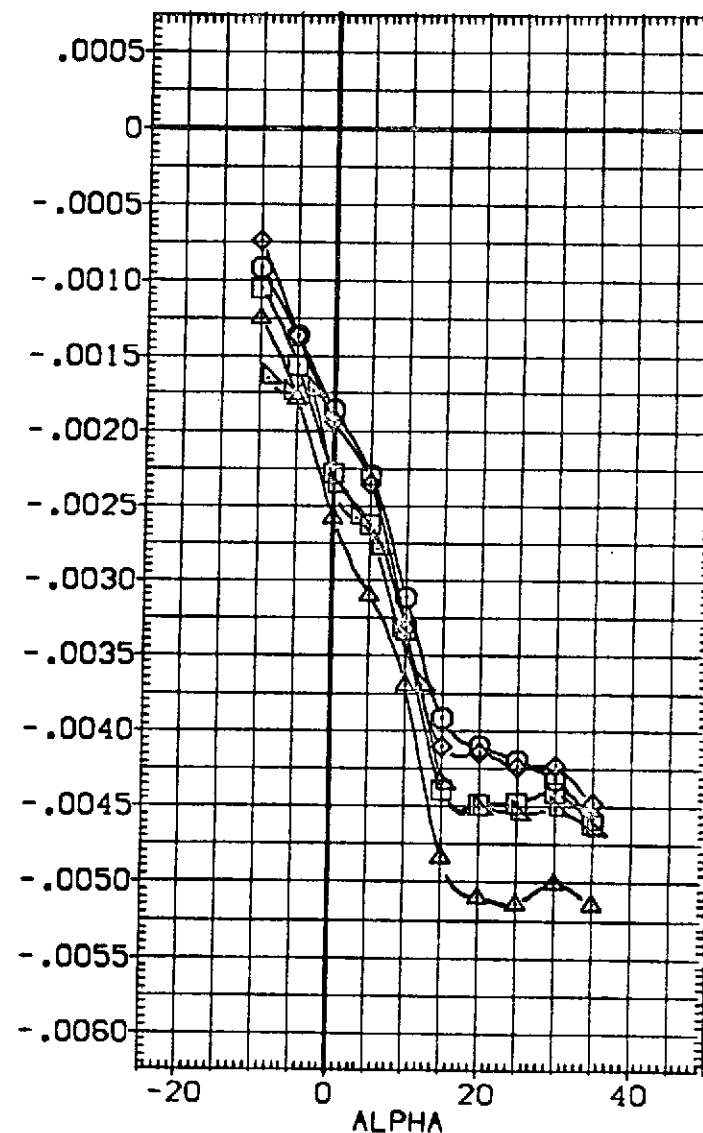
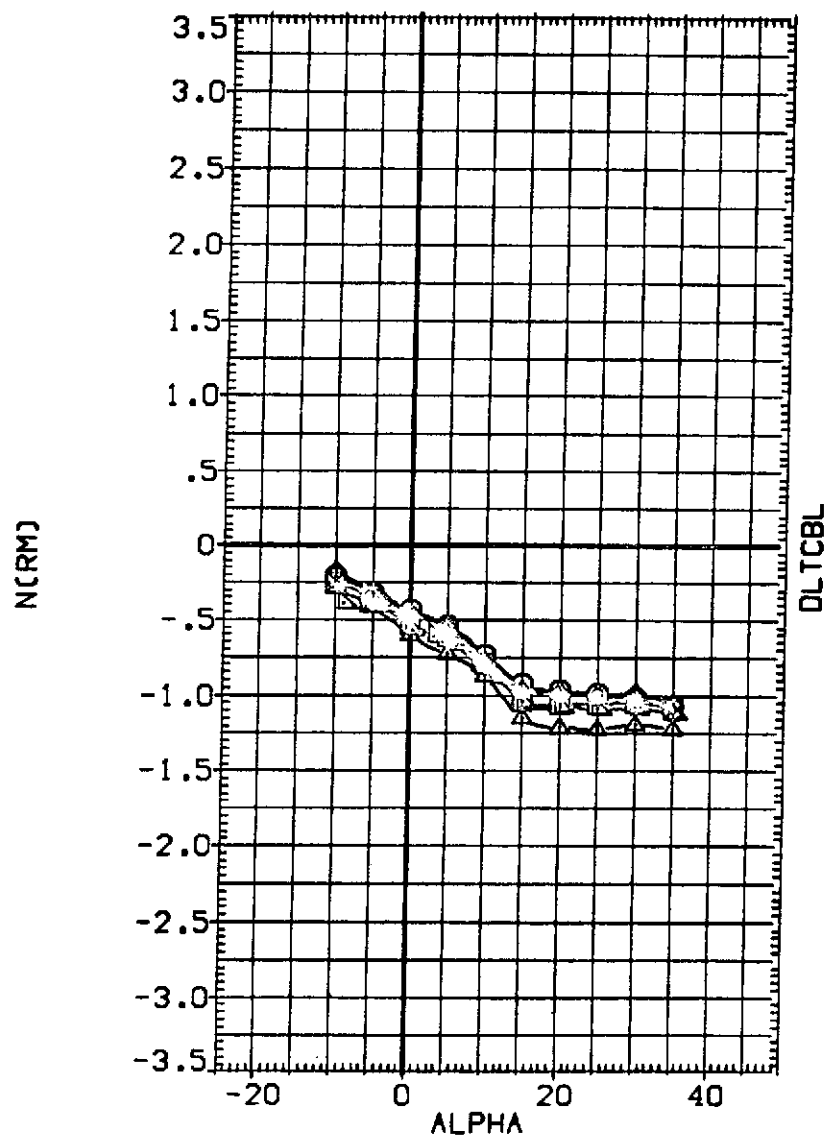


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLD09) | □ OA82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| (CHLD00) | ○ OA82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| (CHLD07) | ◇ OA82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| (CHLD04) | △ OA82 CFHT113 MODEL 32-0 ORB V/N49 (MIXED GAS) |
| (CHLD01) | ▽ OA82 CFHT113 MODEL 32-0 ORB V/N49 (AIR) |

| Q(PSF) | PC RCS | PC THE | PC TAR | REFERENCE INFORMATION | | |
|---------|---------|---------|---------|-----------------------|-----------|---------|
| 150.000 | 159.000 | 100.000 | .000 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF | 474.8100 | IN. |
| 150.000 | 158.000 | 85.000 | 15.000 | BREF | 936.6900 | IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRP | 1076.7000 | IN. |
| 150.000 | 155.000 | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

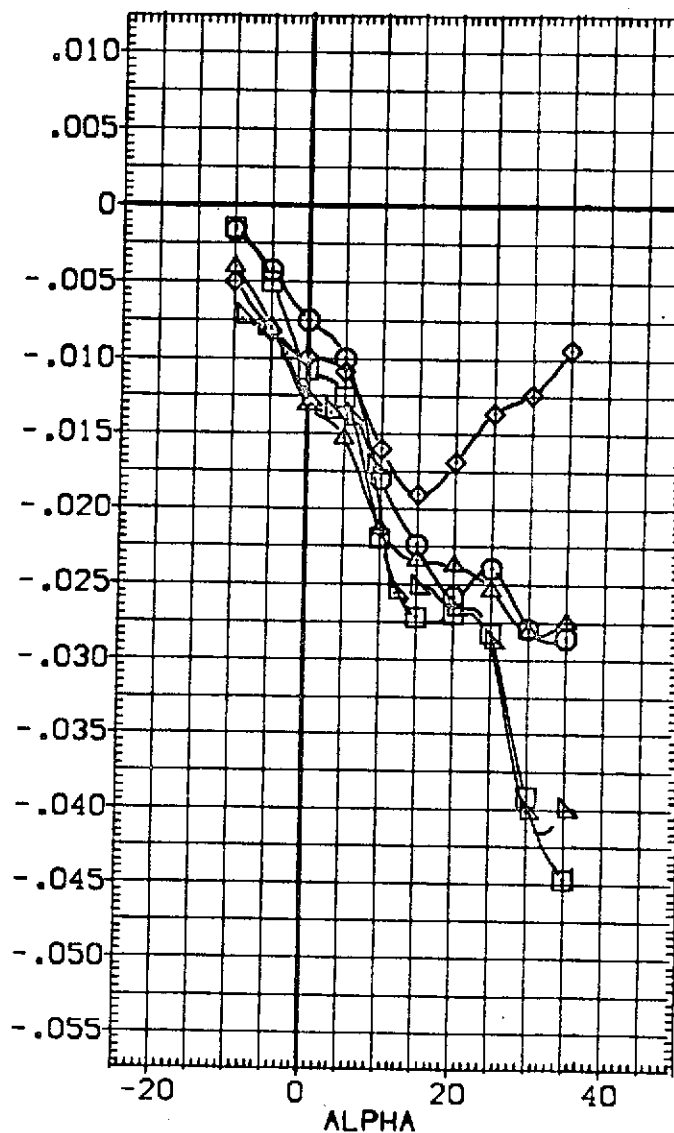
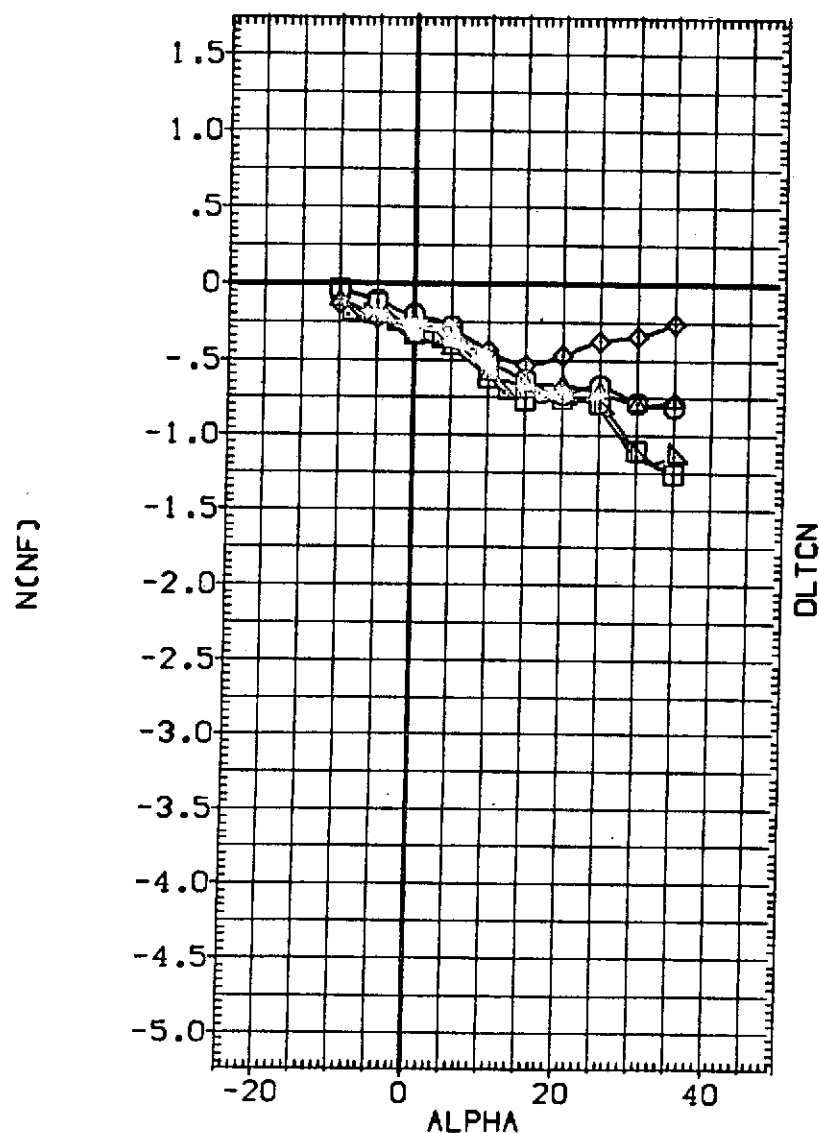


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLD09) | QA82 CFHT113 MODEL 32-0 ORB W/N49 (MIXED GAS) |
| (CHLD00) | QA82 CFHT113 MODEL 32-0 ORB W/N49 (MIXED GAS) |
| (CHLD07) | QA82 CFHT113 MODEL 32-0 ORB W/N49 (MIXED GAS) |
| (CHLD04) | QA82 CFHT113 MODEL 32-0 ORB W/N49 (MIXED GAS) |
| (CHLC01) | QA82 CFHT113 MODEL 32-0 ORB W/N49 (AIR) |

| Q(PSF) | PCRC5 | PCTHE | PCTAR | REFERENCE INFORMATION | | |
|---------|---------|---------|---------|-----------------------|-----------|---------|
| 150.000 | 158.000 | 100.000 | .000 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF | 474.9100 | IN. |
| 150.000 | 158.000 | 85.000 | 15.000 | BREF | 936.6800 | IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRP | 1076.7000 | IN. |
| 150.000 | 155.000 | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

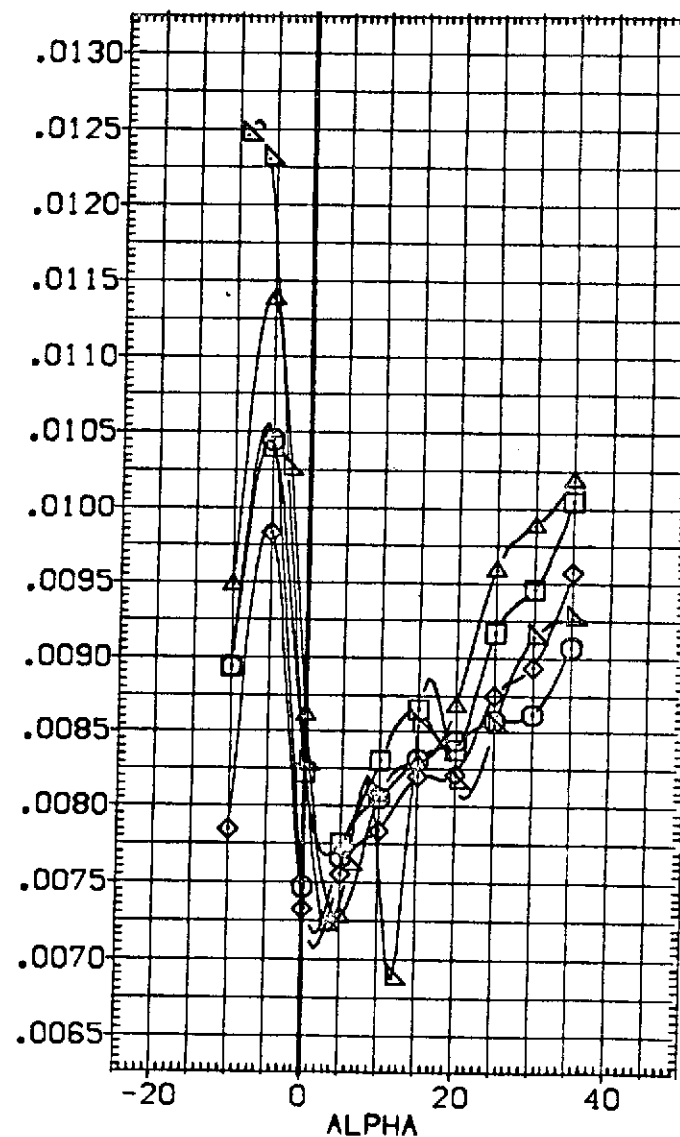
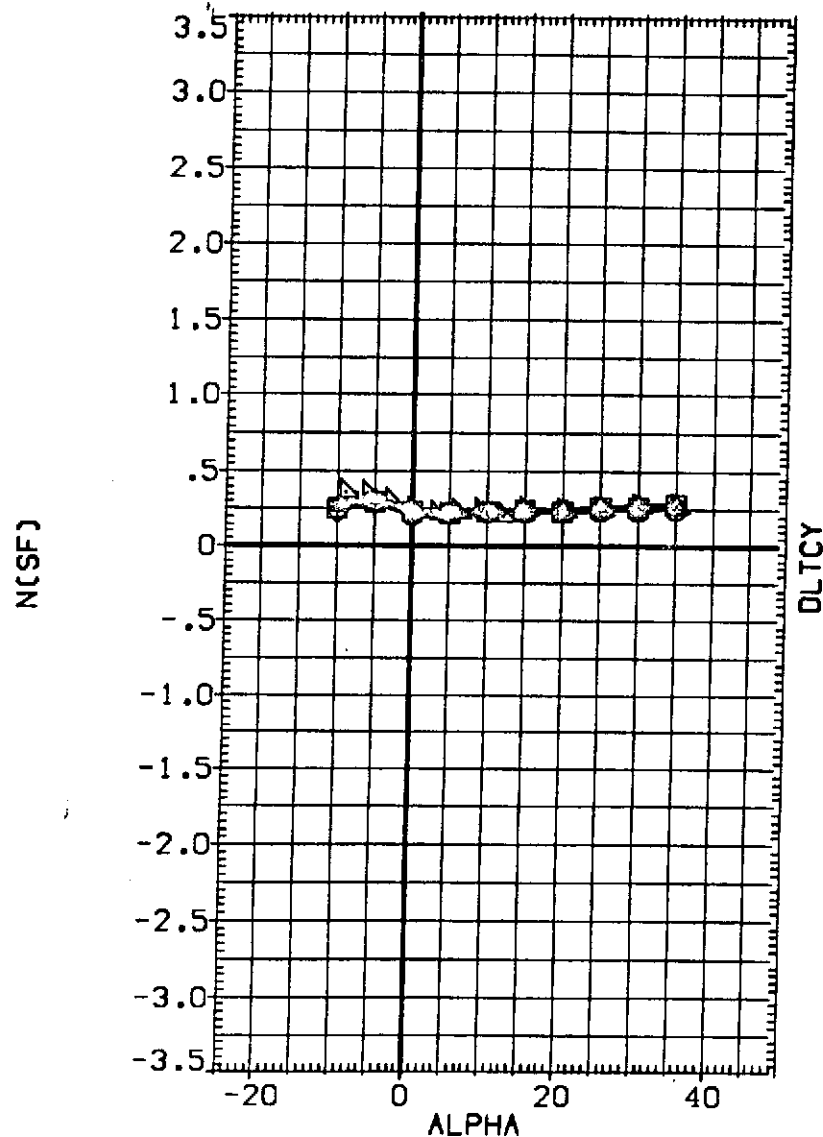


FIG. 30 EFFECT OF RCS RT RATIO ON AERO CHARACT., N49 JETS

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | PC THE | PC TAR | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|---------|---------|-----------------------|------------------|
| (RHLFO4) | 0A82 CFHT113 MODEL 32-0 ORB V/N55 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SO.FT. |
| (RHLMI1) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 IN. |
| (RHLMO1) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.6800 IN. |
| (RHLMO5) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 IN. |
| (RHLMO5) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 IN. |
| (RHLMO9) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

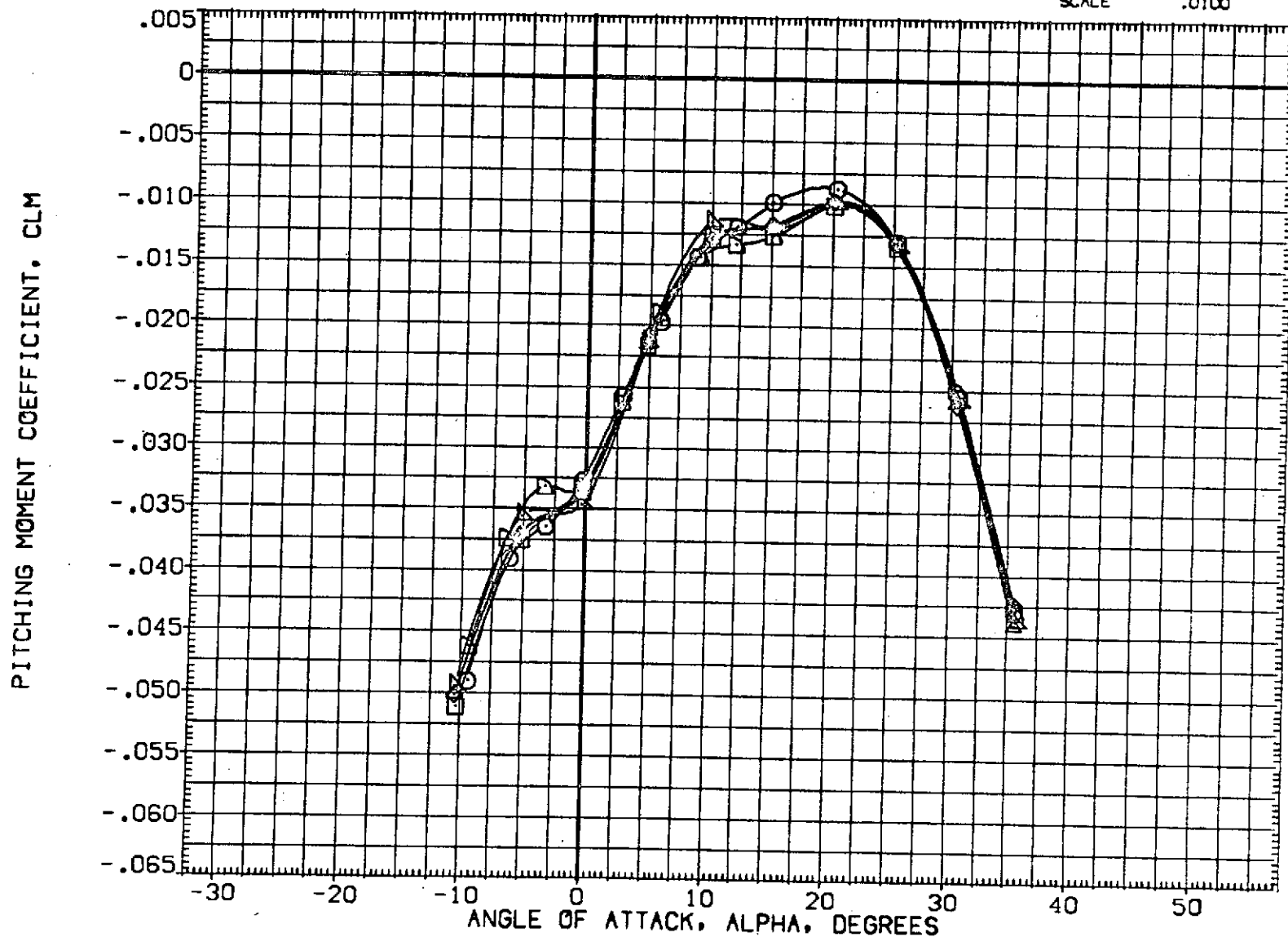


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | PCTHE | PCTAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150,000 | 158,000 | 100,000 | 100,000 | SREF | 2690.0000 | 50. FT. |
| (RHLM11) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150,000 | 158,000 | 100,000 | 100,000 | LREF | 474.8100 | IN. |
| (RHLM01) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150,000 | 158,000 | 90,000 | 10,000 | BREF | 936.6800 | IN. |
| (RHLM06) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150,000 | 158,000 | 85,000 | 15,000 | XM RP | 1076.7000 | IN. |
| (RHLM05) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150,000 | 158,000 | 100,000 | 100,000 | YM RP | .0000 | IN. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150,000 | 155,000 | | | ZM RP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

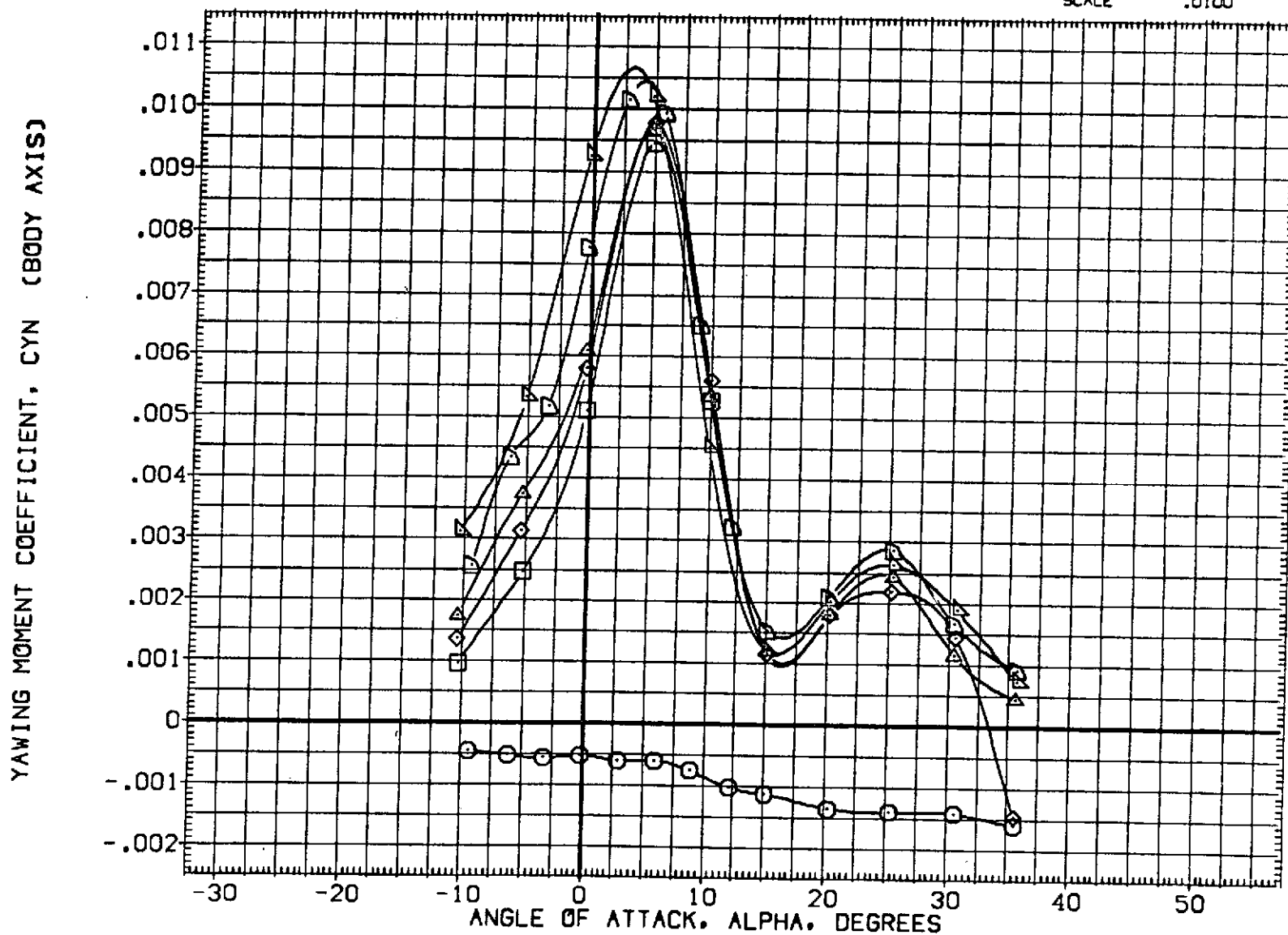


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS

(A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | PCTH | PCTAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLFO4) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHLMI1) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 | IN. |
| (RHLMO1) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (MIXED GAS) | 150.000 | 158.000 | 80.000 | 10.000 | BREF | 935.6800 | IN. |
| (RHLMO6) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| (RHLMO5) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| (RHLMO9) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

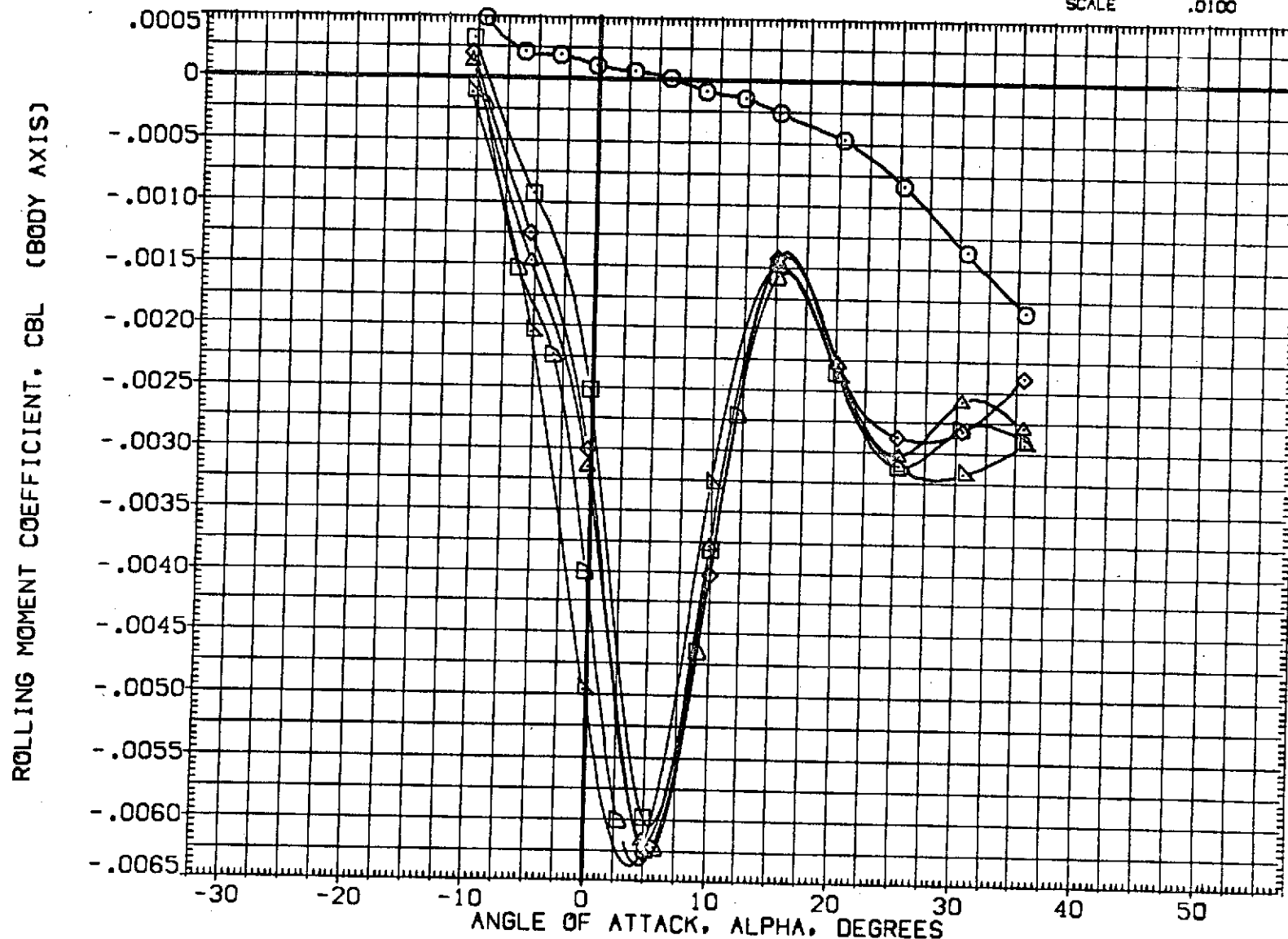


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | PCTHE | PCTAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHLM11) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 | IN. |
| (RHLMO1) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.3800 | IN. |
| (RHLMO6) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| (RHLMO5) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| (RHLMO9) | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

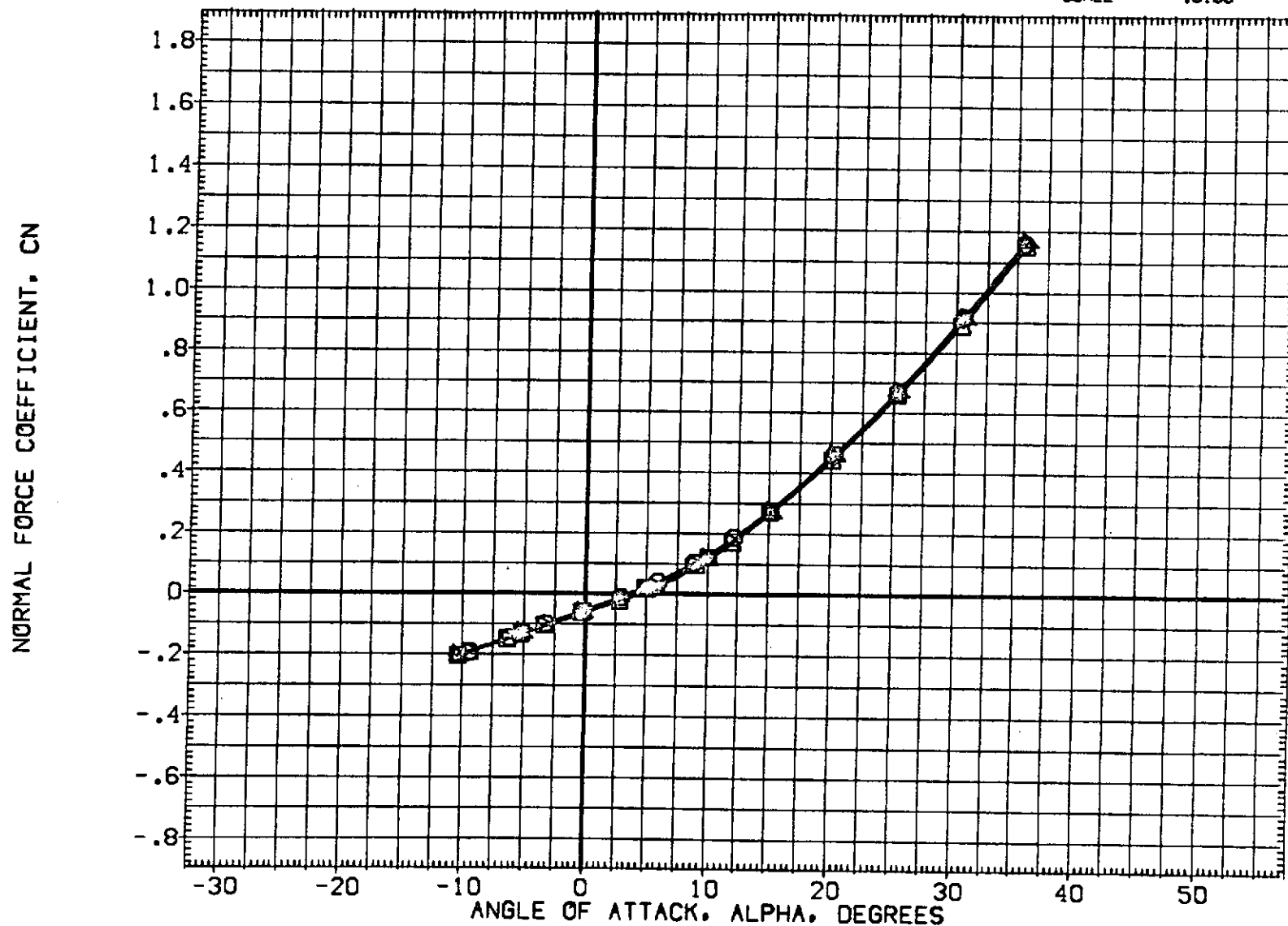


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | PCHE | PCTAR | REFERENCE INFORMATION | |
|-----------------|---|---------|---------|---------|---------|-----------------------|------------------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 SQ.FT. |
| (RHLM11) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 IN. |
| (RHLM01) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.6800 IN. |
| (RHLM06) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 IN. |
| (RHLM05) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 IN. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 ORB V/N52 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 IN. |
| | | | | | | SCALE | .0100 |

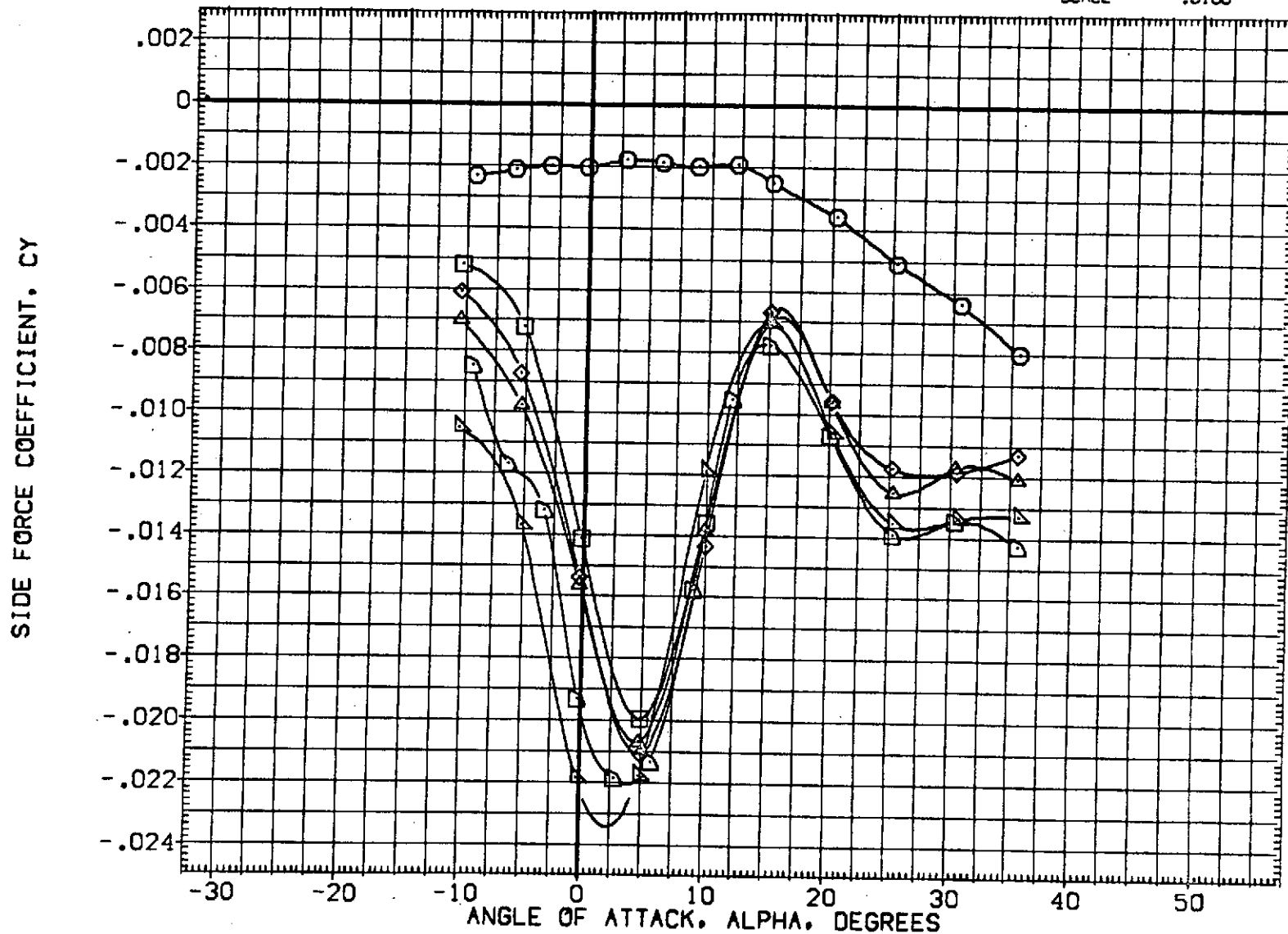


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PC RCS | PC THE | PC TAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 GR8 V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHLM11) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (MIXED GAS) | 150.000 | 158.000 | 100.000 | .000 | LREF | 474.8100 | IN. |
| (RHLM01) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (MIXED GAS) | 150.000 | 158.000 | 90.000 | 10.000 | BREF | 936.6800 | IN. |
| (RHLM06) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (MIXED GAS) | 150.000 | 158.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| (RHLM05) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (MIXED GAS) | 150.000 | 158.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| (RHL009) | QAB2 CFHT113 MODEL 32-0 GR8 V/N52 (AIR) | 150.000 | 155.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

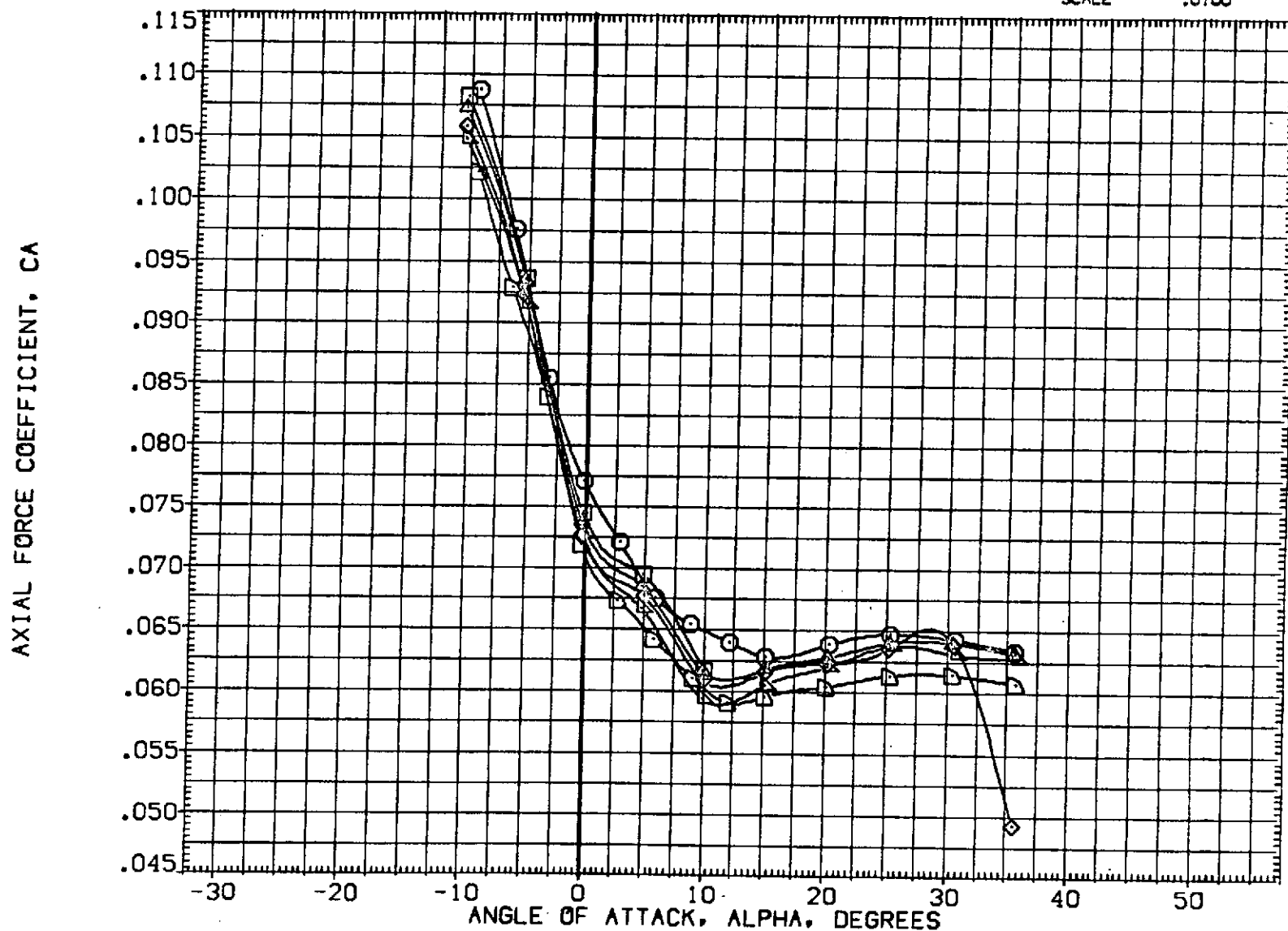


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS

(A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLD11] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (MIXED GAS) |
| [CHLD01] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (MIXED GAS) |
| [CHLD06] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (MIXED GAS) |
| [CHLD05] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (MIXED GAS) |
| [CHLC09] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (AIR) |

| Q(PSF) | PCPCS | PCTHE | PCTAR | REFERENCE INFORMATION | | |
|---------|---------|---------|---------|-----------------------|-----------|--------|
| 150.000 | 158.000 | 100.000 | .000 | SREF | 2690.0000 | 50.FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF | 474.8100 | IN. |
| 150.000 | 158.000 | 85.000 | 15.000 | BREF | 936.6800 | IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRP | 1076.7000 | IN. |
| 150.000 | 155.000 | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

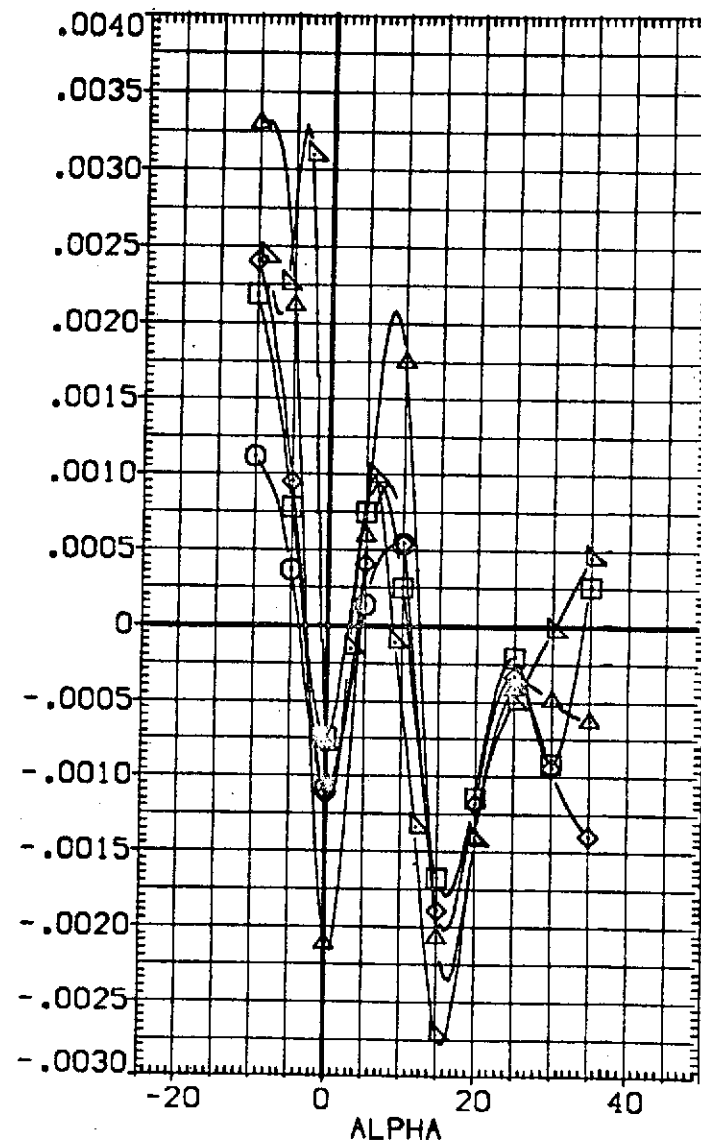
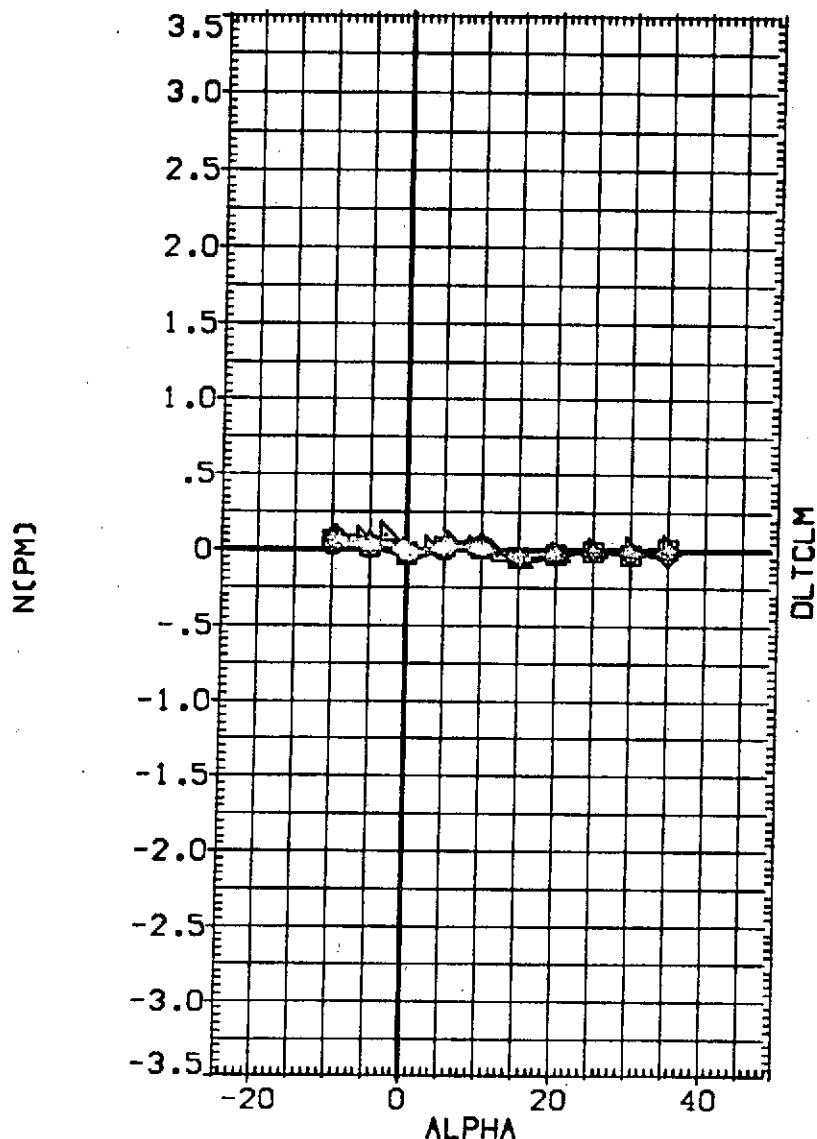


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

| | | |
|----------|---|---|
| (CHLD11) | □ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD01) | ○ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD06) | △ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD05) | ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD09) | ▽ | 0A82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| | | (AIR) |

| Q(PSF) | PC RCS | PC THE | PC TAR | REFERENCE INFORMATION | | |
|---------|---------|---------|---------|-----------------------|-----------|---------|
| 150,000 | 158,000 | 100,000 | .000 | SREF | 2690.0000 | 50. FT. |
| 150,000 | 158,000 | 90,000 | 10,000 | LREF | 474.8100 | IN. |
| 150,000 | 158,000 | 85,000 | 15,000 | BREF | 936.6800 | IN. |
| 150,000 | 158,000 | .000 | 100,000 | XMRP | 1076.7000 | IN. |
| 150,000 | 155,000 | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

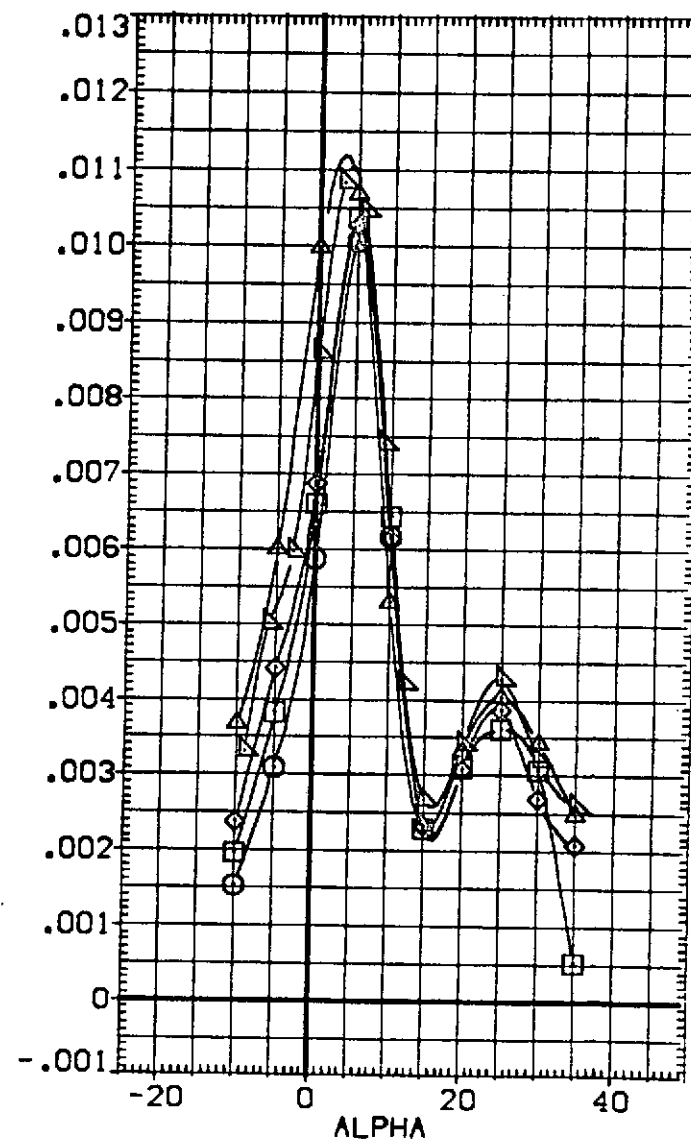
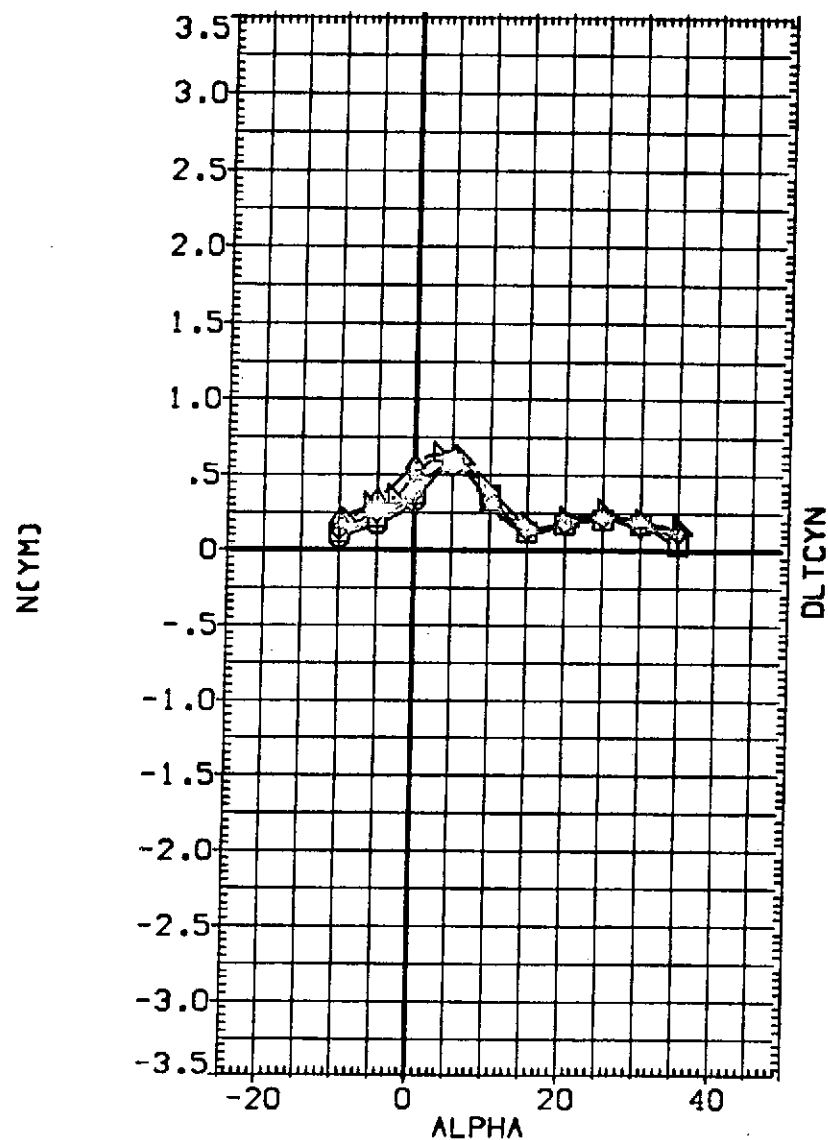


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS

(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| [CHLD11] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (MIXED GAS) |
| [CHLD01] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (MIXED GAS) |
| [CHLD06] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (MIXED GAS) |
| [CHLD05] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (MIXED GAS) |
| [CHLD09] | 0A82 CFHT113 MODEL 32-0 ORB V/NS2 (AIR) |

| Q(PSF) | PCRC | PCTH | PCTAR | REFERENCE INFORMATION |
|---------|---------|---------|---------|-----------------------|
| 150.000 | 158.000 | 100.000 | .000 | SREF 2690.0000 SQ.FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF 474.8100 IN. |
| 150.000 | 158.000 | 85.000 | 15.000 | BREF 936.6800 IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRF 1076.7000 IN. |
| 150.000 | 155.000 | | | YMRF .0000 IN. |
| | | | | ZMRF 375.0000 IN. |
| | | | | SCALE .0100 |

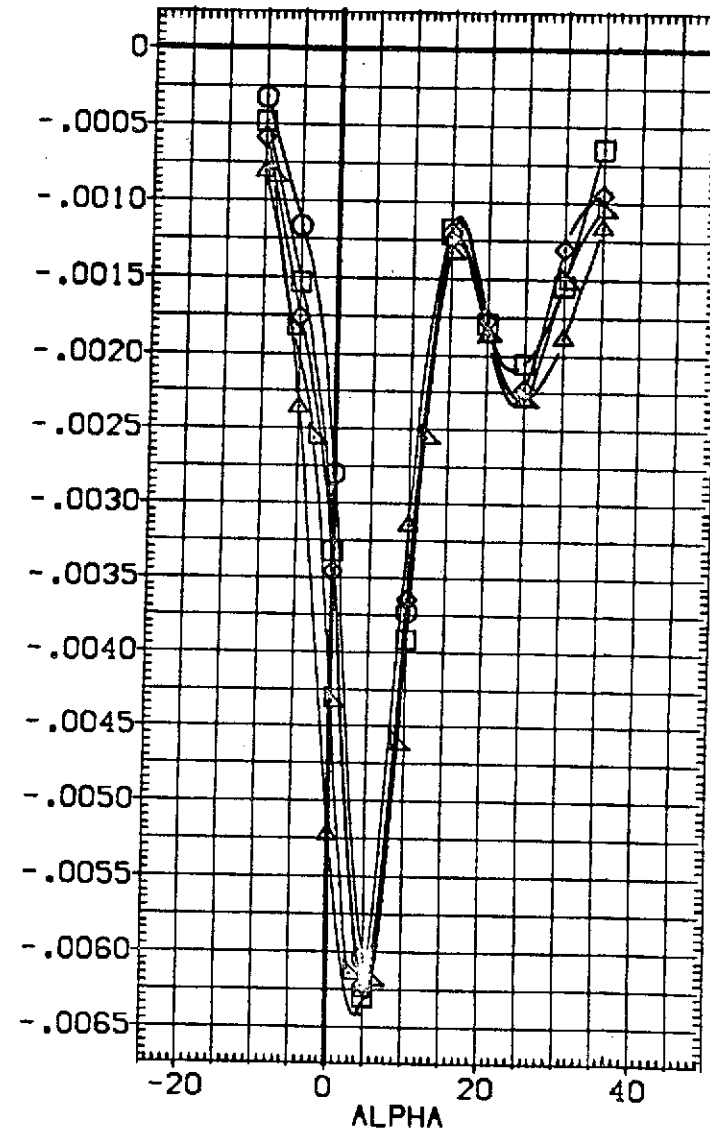
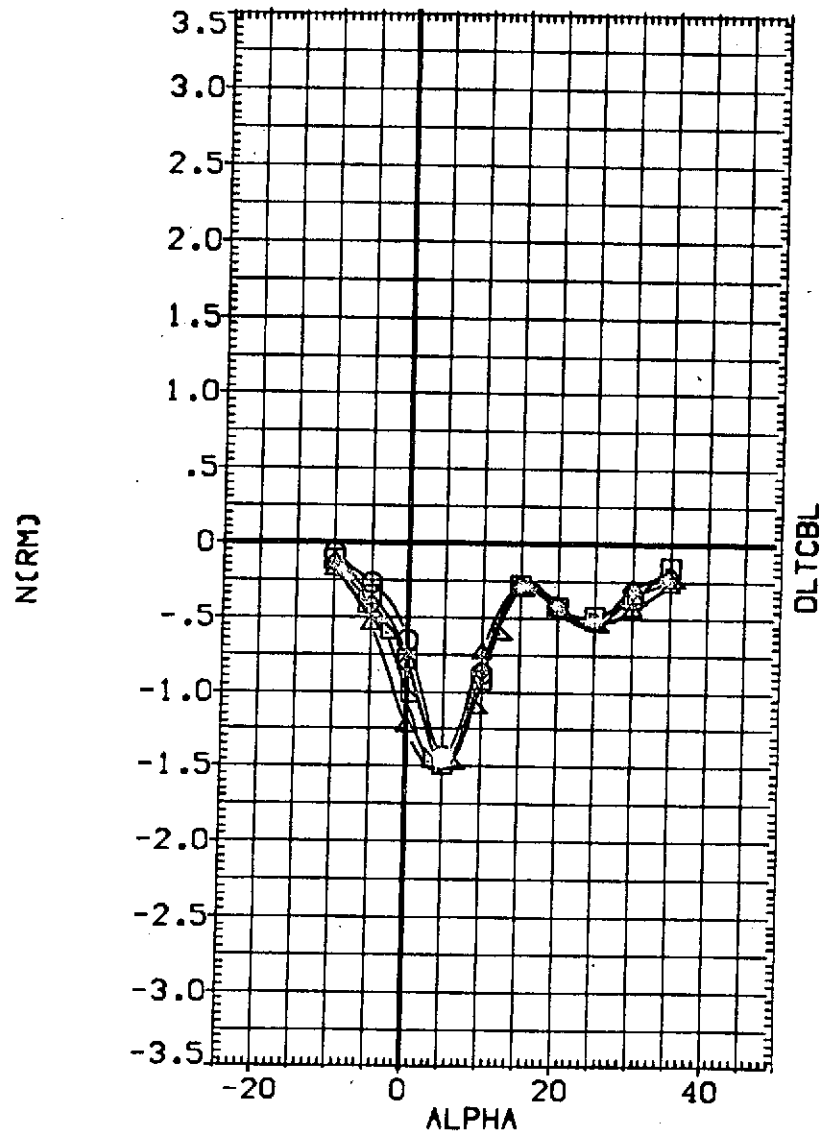


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLD01) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD01) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD06) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD05) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD09) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |

| Q(PSF) | PCRC | PCTH | PCTAR | REFERENCE INFORMATION | | |
|---------|---------|---------|---------|-----------------------|-----------|---------|
| 150.000 | 158.000 | 100.000 | .000 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF | 474.8100 | IN. |
| 150.000 | 158.000 | 85.000 | 15.000 | BREF | 936.6800 | IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRP | 1076.7000 | IN. |
| 150.000 | 155.000 | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

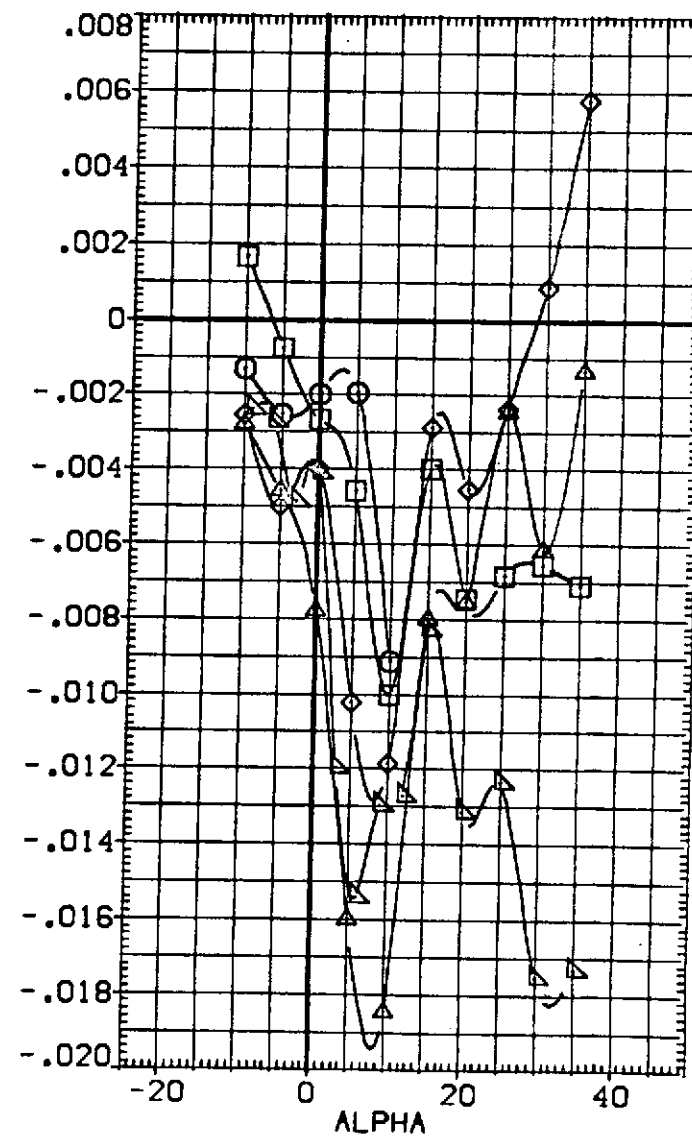
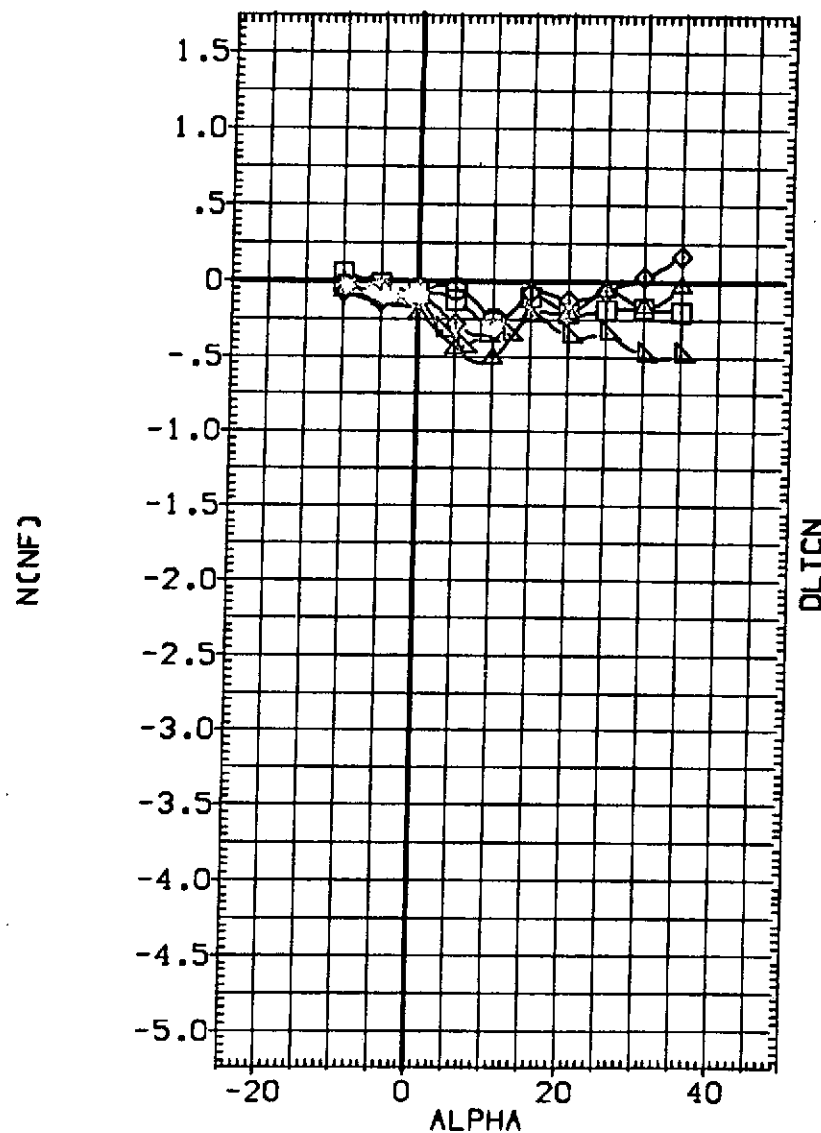


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS
(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLD11) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD01) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD06) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLD05) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (MIXED GAS) |
| (CHLC09) | QA82 CFHT113 MODEL 32-0 ORB V/N52 (AIR) |

| Q(PSF) | PCRC | PCTHE | PCTAR | REFERENCE INFORMATION | | |
|---------|---------|---------|---------|-----------------------|-----------|---------|
| 150.000 | 158.000 | 100.000 | .000 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 158.000 | 90.000 | 10.000 | LREF | 474.8100 | IN. |
| 150.000 | 158.000 | 85.000 | 15.000 | BREF | 936.6800 | IN. |
| 150.000 | 158.000 | .000 | 100.000 | XMRP | 1076.7000 | IN. |
| 150.000 | 155.000 | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

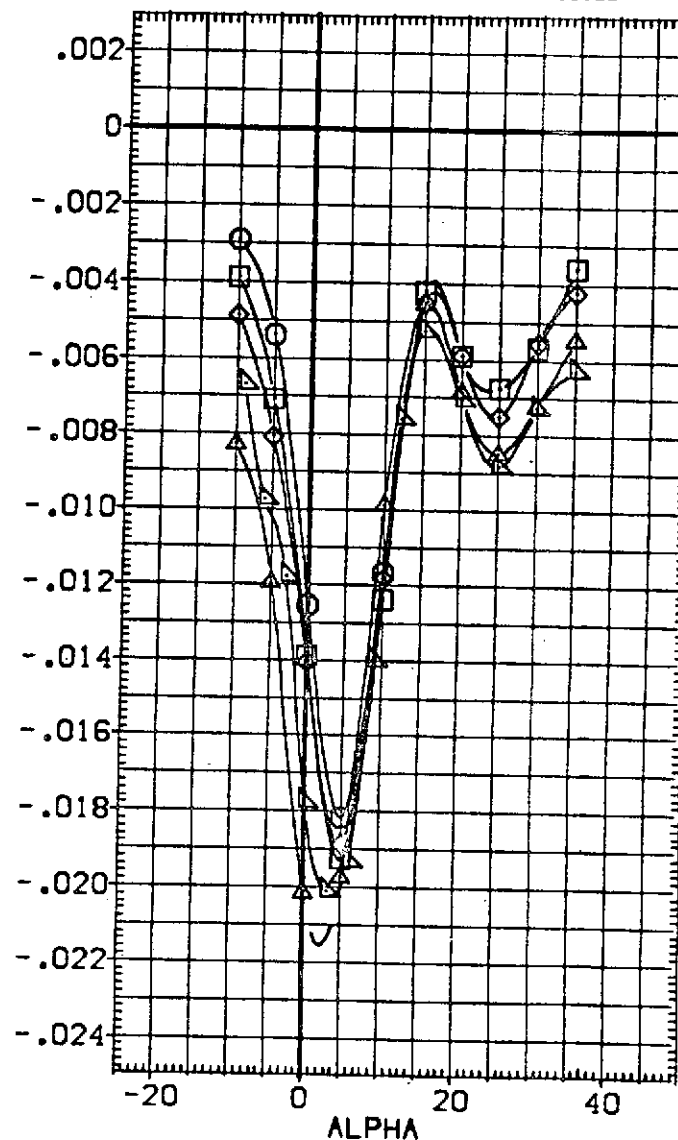
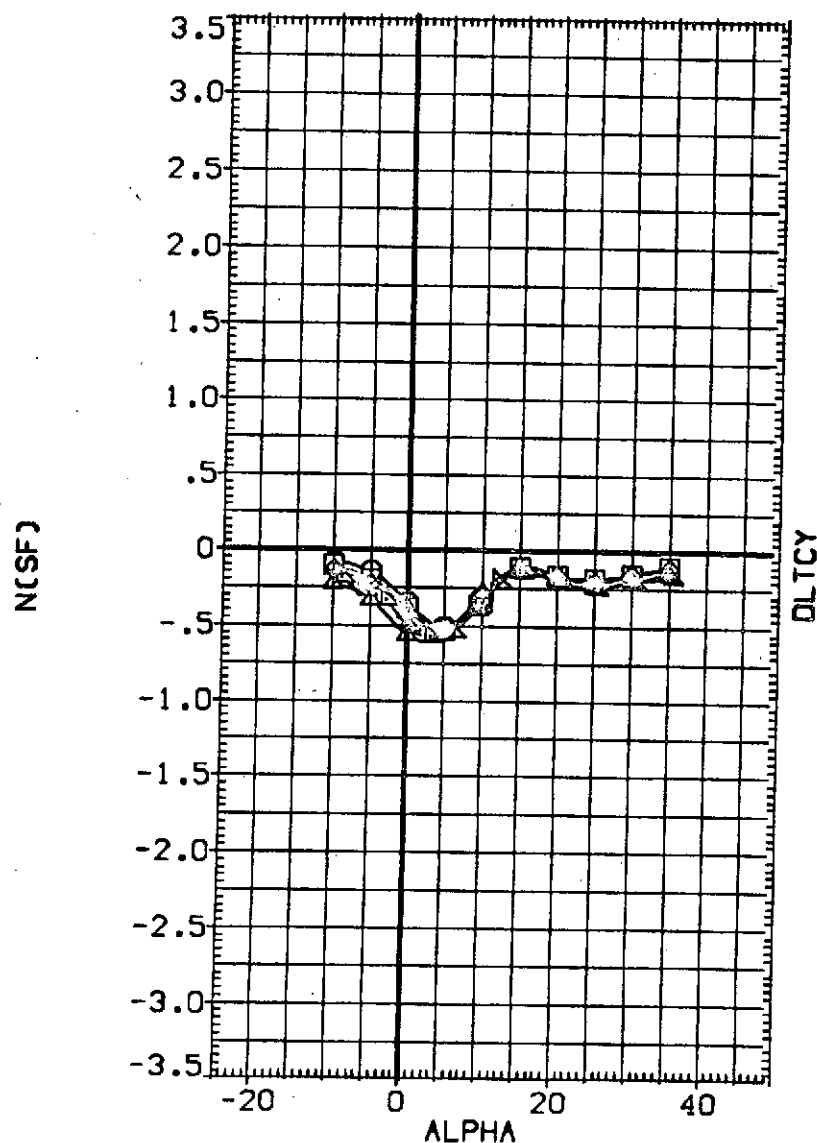


FIG. 31 EFFECT OF RCS RT RATIO ON AERO CHARACT., N52 JETS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | PCTHE | PCTAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLF04) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | 160.000 | 100.000 | 100.000 | SREF | 2690.0000 | 50. FT. |
| (RHLM10) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 100.000 | 10.000 | LREF | 474.8100 | IN. |
| (RHLM02) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 90.000 | 10.000 | BREF | 936.6800 | IN. |
| (RHLM08) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 85.000 | 15.000 | XM RP | 1076.7000 | IN. |
| (RHLM03) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | .000 | 100.000 | YM RP | .0000 | IN. |
| (RHL011) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | | | ZM RP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

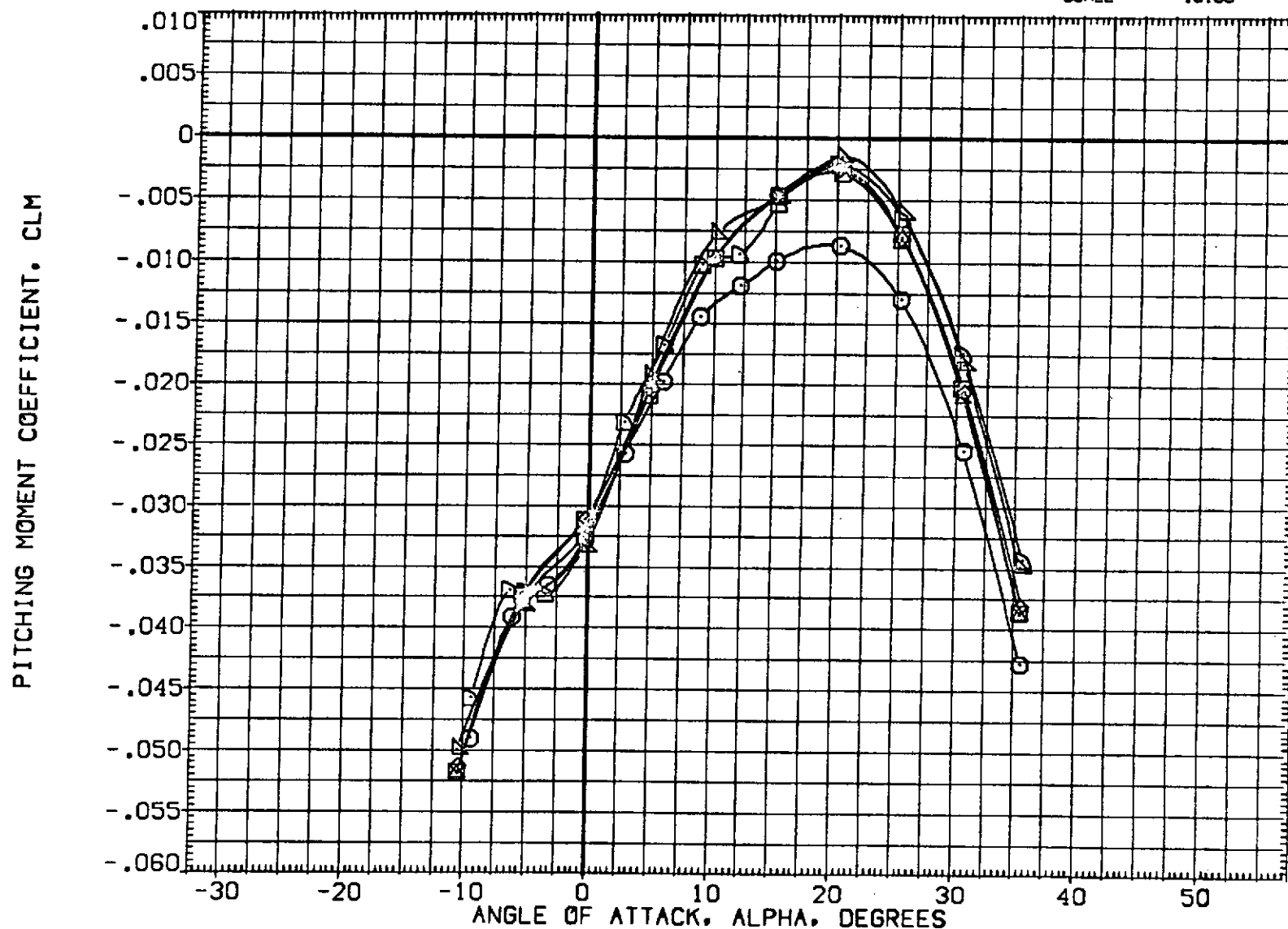


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PCRC | PCHE | PCTAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|--------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50.FT. |
| (RHLM10) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 100.000 | .000 | LREF | 474.3100 | IN. |
| (RHLM02) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 90.000 | 10.000 | BREF | 936.6800 | IN. |
| (RHLM08) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| (RHLM03) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| (RHL011) | QAB2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

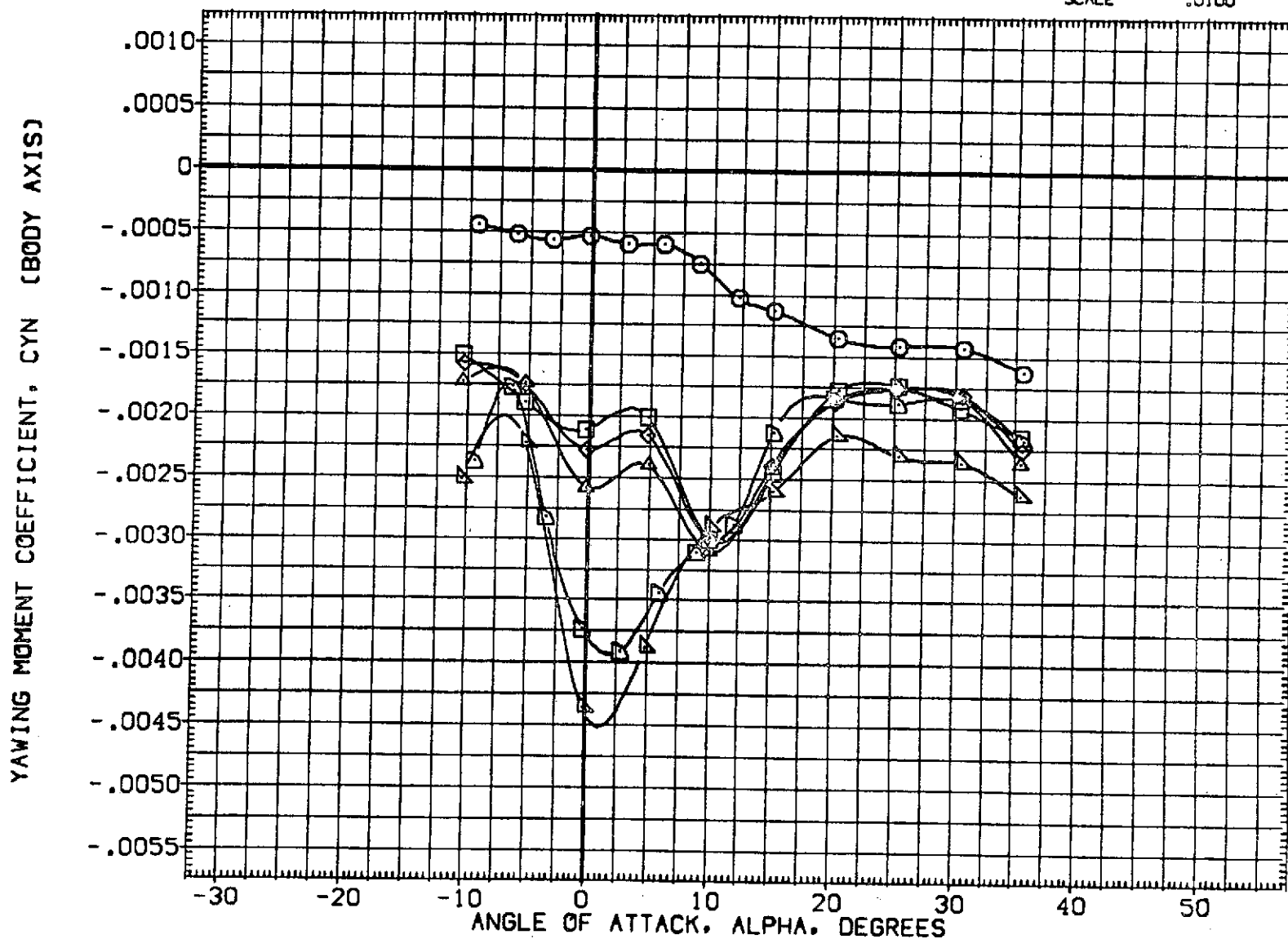


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS
(A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSP) | PCRS | PCHE | PCYAW | REFERENCE INFORMATION |
|-----------------|---|---------|---------|---------|---------|-----------------------|
| (RHLF04) | 0A02 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF 2890.0000 90.FT. |
| (RHLM10) | 0A02 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 100.000 | .000 | LREF 474.0100 IN. |
| (RHLM02) | 0A02 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 90.000 | 10.000 | BREF 936.6300 IN. |
| (RHLM08) | 0A02 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 85.000 | 15.000 | XMRP 1076.7000 IN. |
| (RHLM03) | 0A02 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | .000 | 100.000 | YMRP .0000 IN. |
| (RHL011) | 0A02 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | | | ZMRP 375.0000 IN. |
| | | | | | | SCALE .0100 |

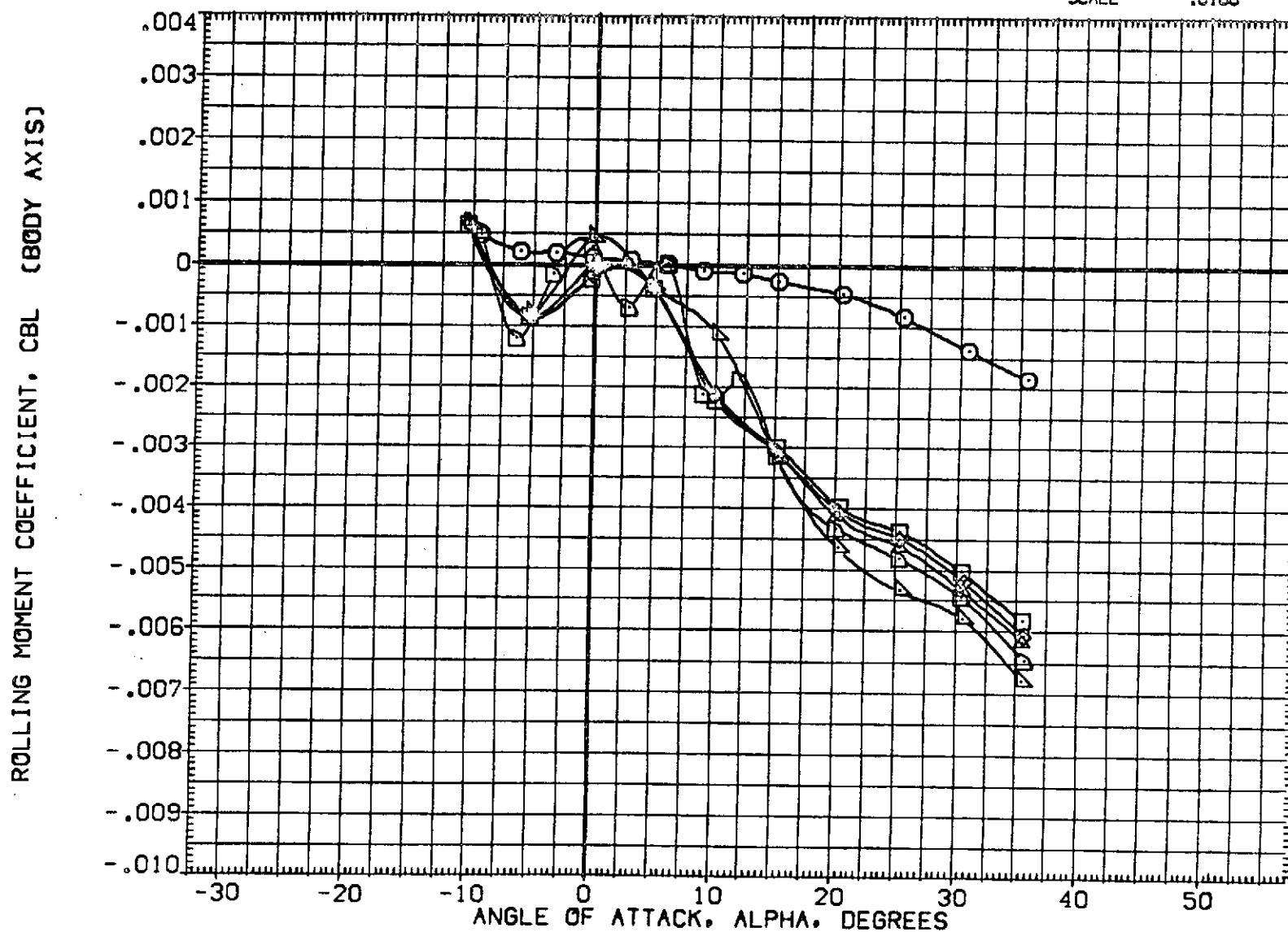


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCRC | PCTH | PCTAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLFD4) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHLMI0) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 100.000 | .000 | LREF | 474.8100 | IN. |
| (RHLMO2) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 90.000 | 10.000 | BREF | 936.6900 | IN. |
| (RHLMO8) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| (RHLMO3) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| (RHL011) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

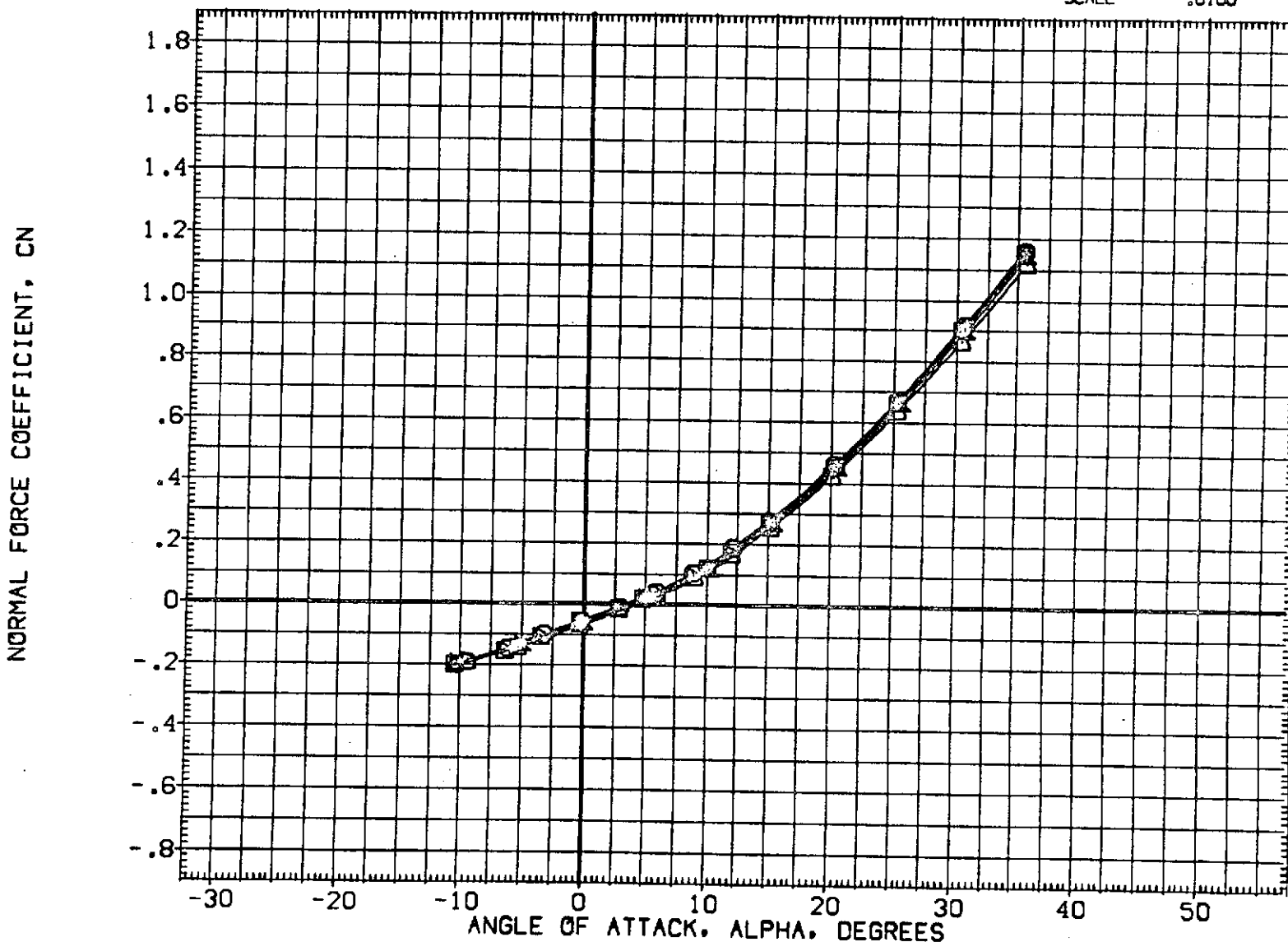


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS

(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q (PSF) | PCACS | PCHE | PCAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|--------|
| (RHLF04) | QAB2 CFHT113 MODEL 32-0 GRB V/N85 RCS OFF | 150.000 | 160.000 | 100.000 | 10.000 | SREF | 2680.0000 | SQ.FT. |
| (RHLF10) | QAB2 CFHT113 MODEL 32-0 GRB V/N85 (MIXED GAS) | 150.000 | 160.000 | 100.000 | 10.000 | LREF | 474.0100 | IN. |
| (RHLF02) | QAB2 CFHT113 MODEL 32-0 GRB V/N85 (MIXED GAS) | 150.000 | 160.000 | 50.000 | 10.000 | BREF | 925.3000 | IN. |
| (RHLF08) | QAB2 CFHT113 MODEL 32-0 GRB V/N85 (MIXED GAS) | 150.000 | 160.000 | 35.000 | 15.000 | XMPP | 1075.7000 | IN. |
| (RHLF03) | QAB2 CFHT113 MODEL 32-0 GRB V/N85 (MIXED GAS) | 150.000 | 160.000 | 100.000 | 100.000 | YMPP | 375.0000 | IN. |
| (RHLF11) | QAB2 CFHT113 MODEL 32-0 GRB V/N85 (AIR) | 150.000 | 159.000 | | | ZMPP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

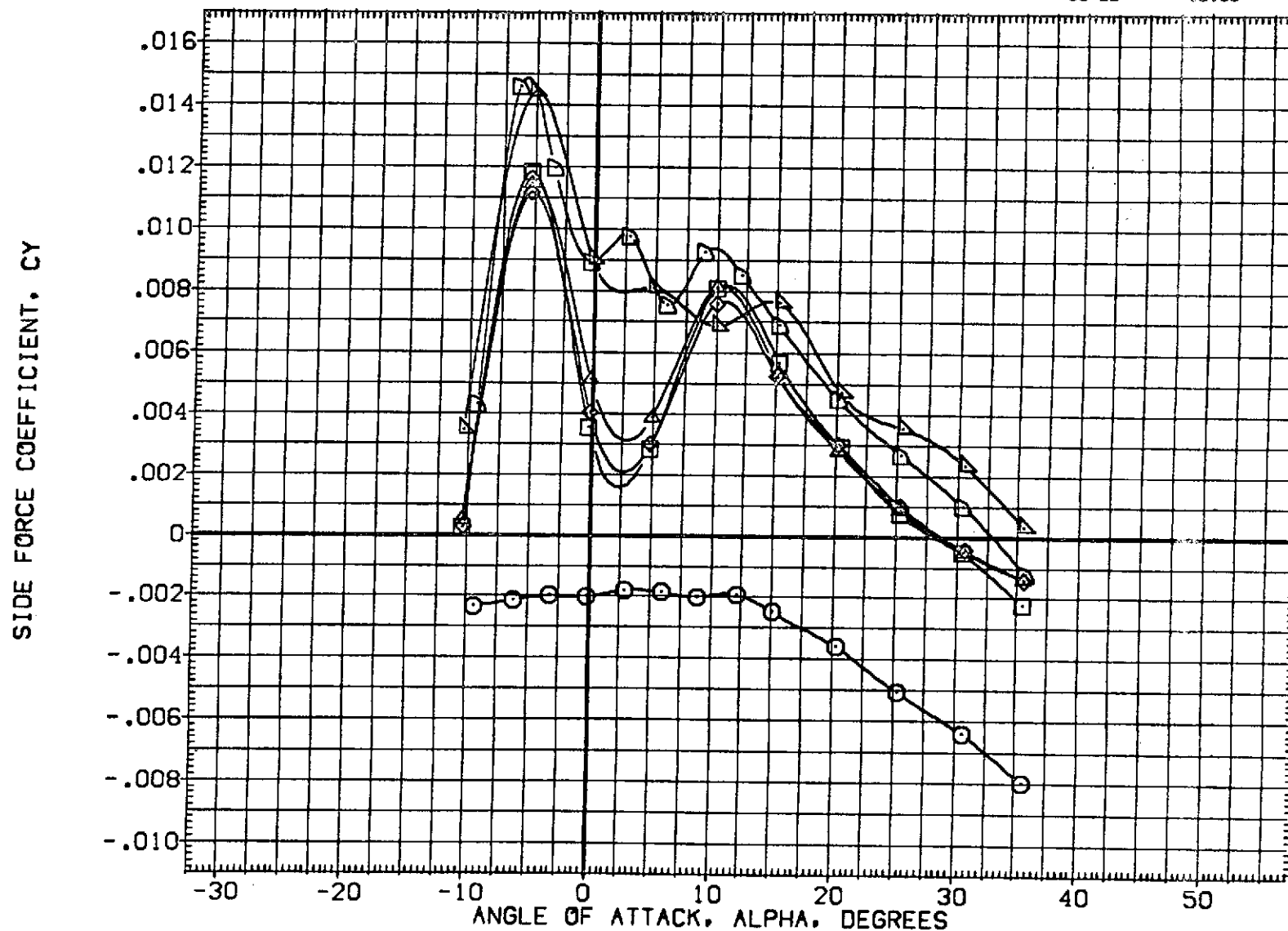


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS
(A)MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | Q(PSF) | PC RCS | PC THE | PC TAR | REFERENCE INFORMATION | | |
|-----------------|---|---------|---------|---------|---------|-----------------------|-----------|---------|
| (RHLFD4) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 RCS OFF | 150.000 | .000 | .000 | .000 | SREF | 2690.0000 | 50. FT. |
| (RHLM10) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 100.000 | .000 | LREF | 474.8100 | IN. |
| (RHLMO2) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 90.000 | 10.000 | BREF | 936.6800 | IN. |
| (RHLMO8) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | 85.000 | 15.000 | XMRP | 1076.7000 | IN. |
| (RHLMO3) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) | 150.000 | 160.000 | .000 | 100.000 | YMRP | .0000 | IN. |
| (RHL011) | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) | 150.000 | 158.000 | | | ZMRP | 375.0000 | IN. |
| | | | | | | SCALE | .0100 | |

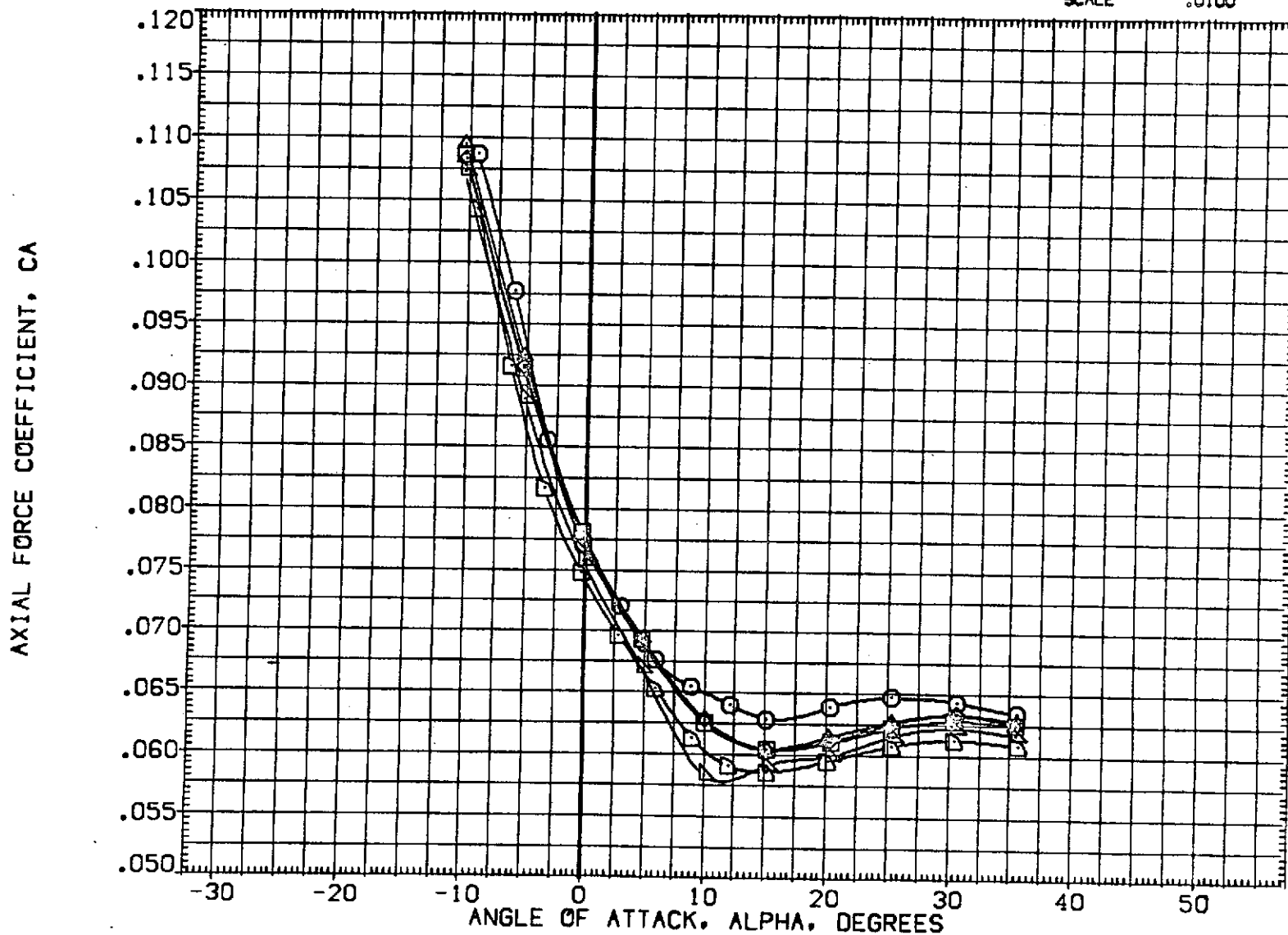


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS

(A) MACH = 10.33

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLD10) | □ 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD02) | ◇ 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD08) | △ 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD03) | △ 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLC11) | △ 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |

| Q(PSF) | PC RCS | PCTHE | PCTAR | REFERENCE INFORMATION | |
|---------|---------|---------|---------|-----------------------|------------------|
| 150.000 | 160.000 | 100.000 | .000 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 160.000 | 90.000 | 10.000 | LREF | 474.9100 IN. |
| 150.000 | 160.000 | 85.000 | 15.000 | BREF | 936.8700 IN. |
| 150.000 | 160.000 | .000 | 100.000 | XMRP | 1076.7000 IN. |
| 150.000 | 158.000 | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

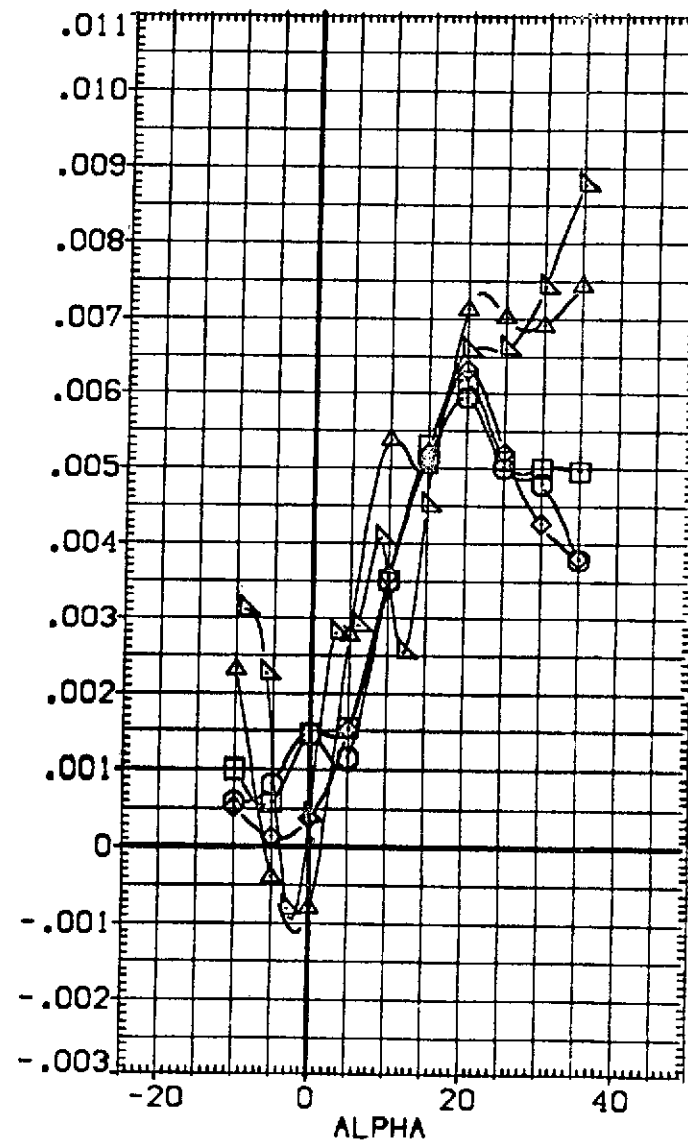
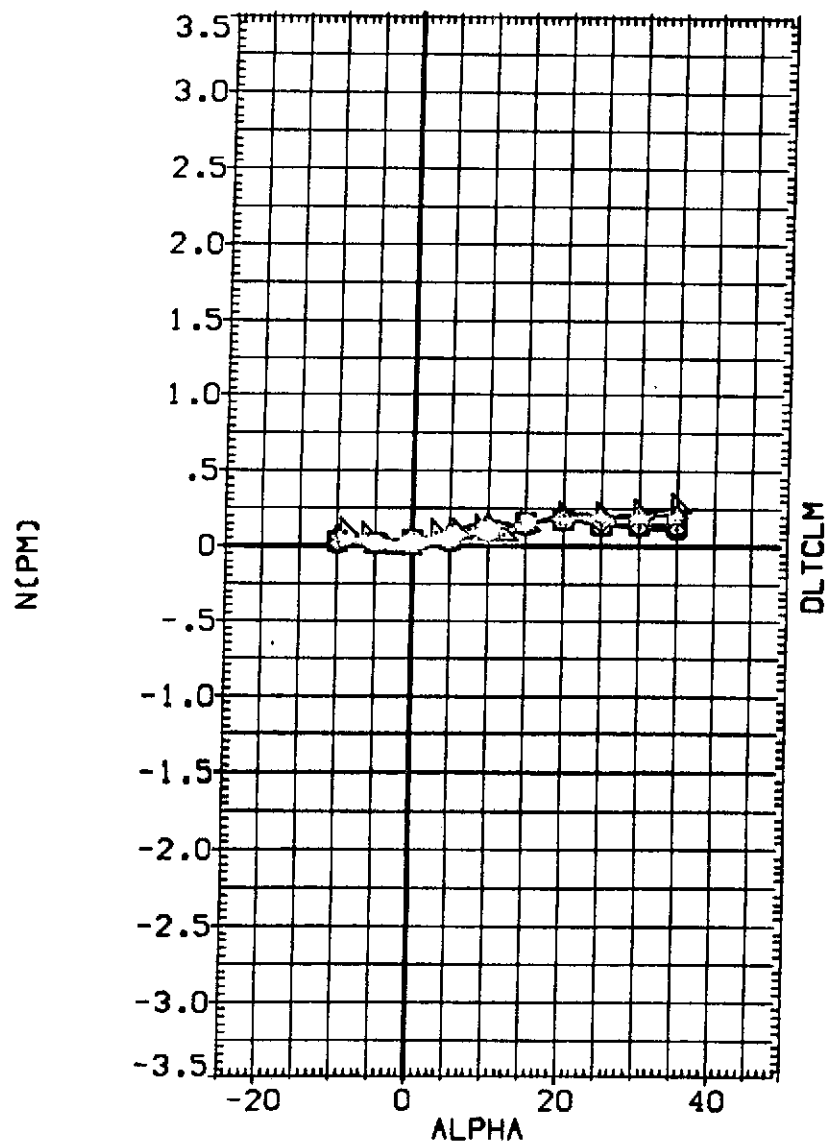


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS

(A)MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|---|
| (CHLD10) | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (MIXED GAS) |
| (CHLD02) | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (MIXED GAS) |
| (CHLD08) | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (MIXED GAS) |
| (CHLD03) | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (MIXED GAS) |
| (CHLC11) | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (AIR) |

| Q(PSF) | PC RCS | PC THE | PC TAR | REFERENCE INFORMATION | | |
|---------|---------|---------|---------|-----------------------|-----------|---------|
| 150.000 | 160.000 | 100.000 | .000 | SREF | 2690.0000 | 50. FT. |
| 150.000 | 160.000 | 90.000 | 10.000 | LREF | 474.8100 | IN. |
| 150.000 | 160.000 | 85.000 | 15.000 | BREF | 936.6800 | IN. |
| 150.000 | 160.000 | .000 | 100.000 | XMRP | 1076.7000 | IN. |
| 150.000 | 158.000 | | | YMRP | .0000 | IN. |
| | | | | ZMRP | 375.0000 | IN. |
| | | | | SCALE | .0100 | |

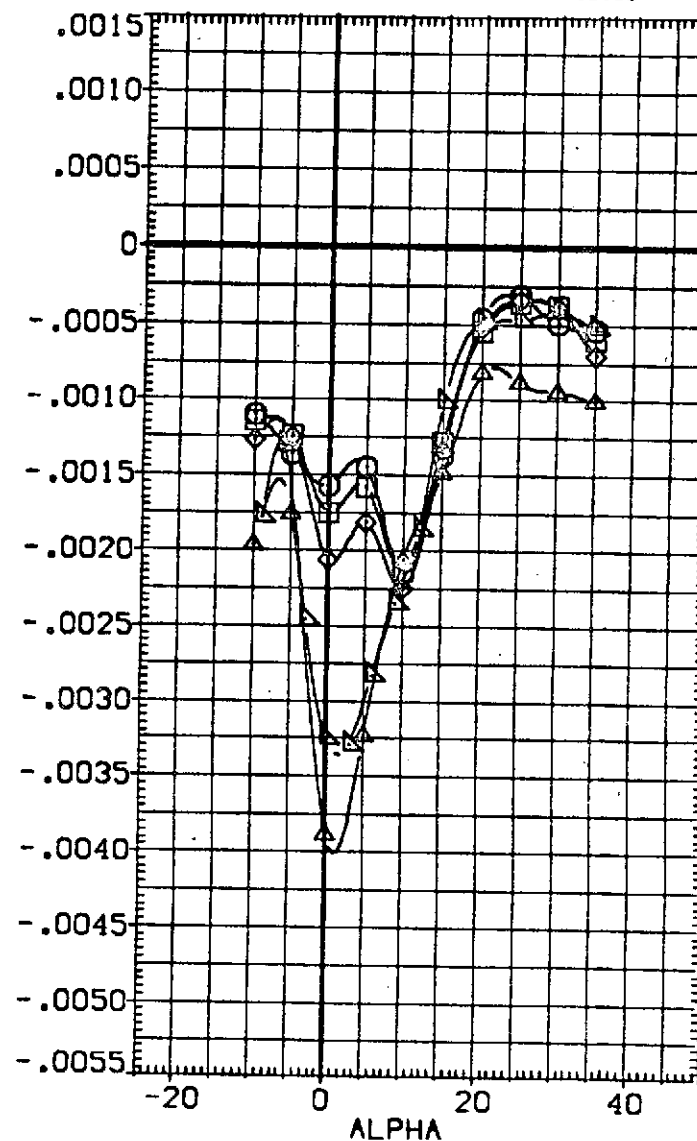
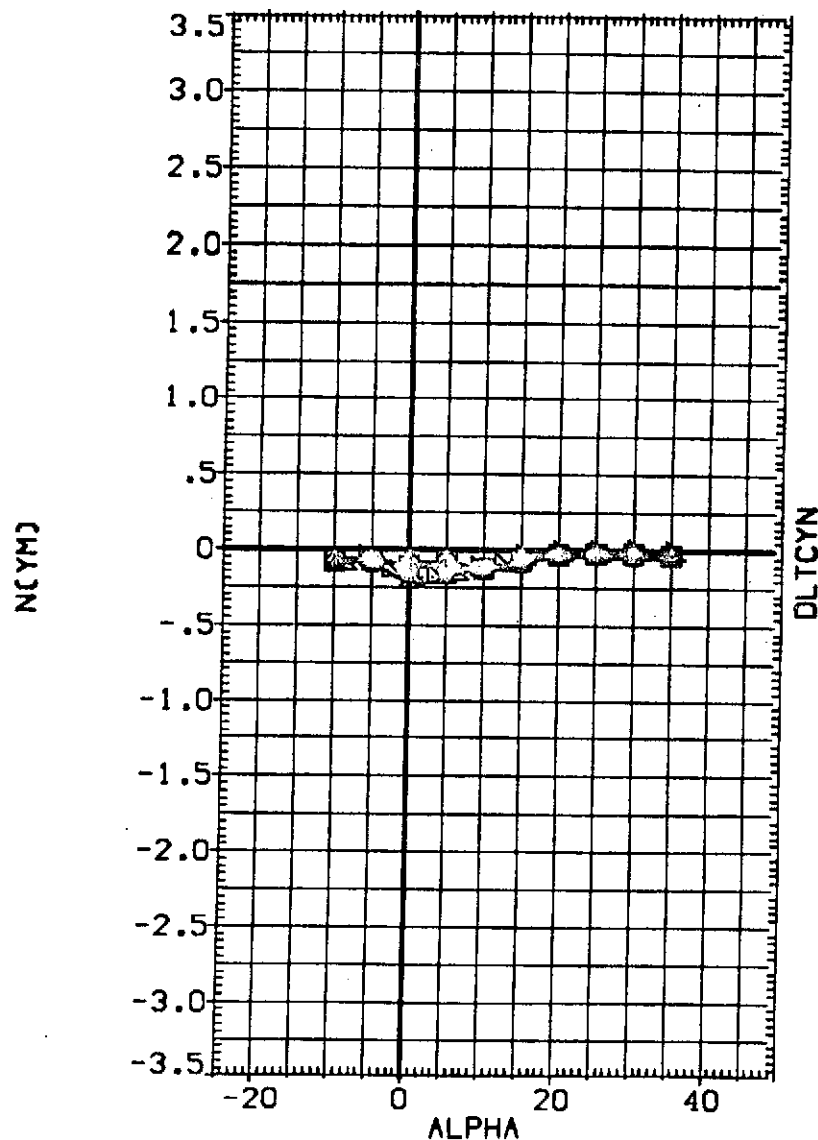


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS

(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

| | | |
|----------|---|---|
| [CHLD10] | ○ | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (MIXED GAS) |
| [CHLD02] | □ | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (MIXED GAS) |
| [CHLD08] | × | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (MIXED GAS) |
| [CHLD03] | △ | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (MIXED GAS) |
| [CHLC11] | △ | 0A82 CFHT113 MODEL 32-0 OR8 V/N85 (AIR) |

| Q(PSF) | PCRC | PCTH | PCTAR | REFERENCE INFORMATION | |
|---------|---------|---------|---------|-----------------------|------------------|
| 150.000 | 160.000 | 100.000 | .000 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 160.000 | 90.000 | 10.000 | LREF | 474.8100 IN. |
| 150.000 | 160.000 | 85.000 | 15.000 | BREF | 936.5600 IN. |
| 150.000 | 160.000 | .000 | 100.000 | XMRP | 1076.7000 IN. |
| 150.000 | 158.000 | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

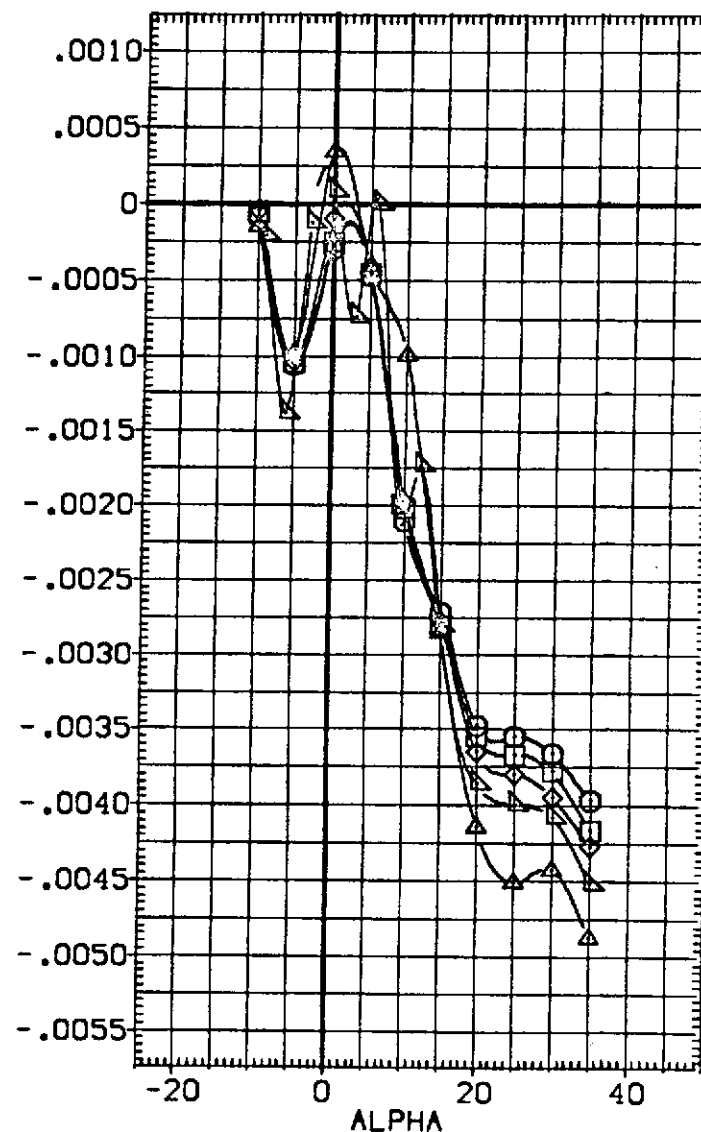
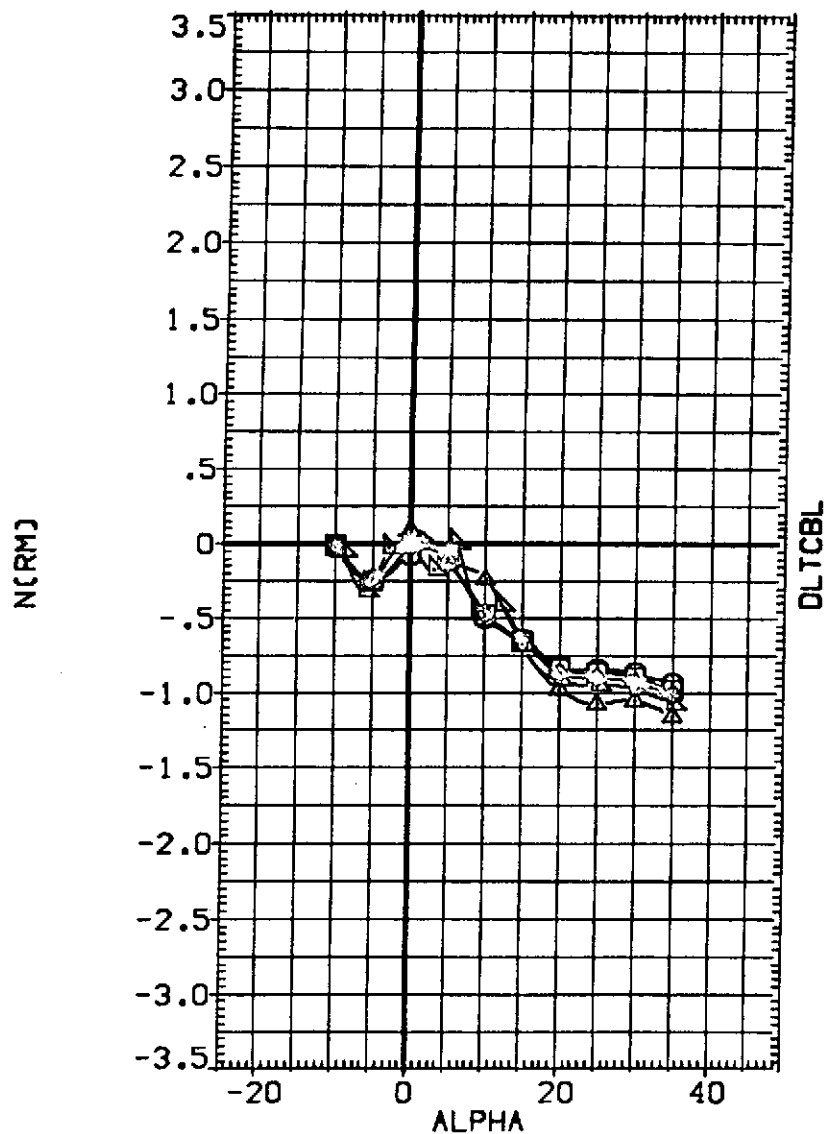


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS
(A) MACH = 10.30

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION |
|-----------------|--|
| (CHLD10) | DATA2 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD02) | DATA2 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD08) | DATA2 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD03) | DATA2 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLC11) | DATA2 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |

| D(P/SF) | PCRC | PCTHE | PCTAR | REFERENCE INFORMATION |
|---------|---------|---------|---------|-----------------------|
| 150.000 | 160.000 | 100.000 | .000 | SREF 2690.0000 80.FT. |
| 150.000 | 160.000 | 90.000 | 10.000 | LREF 474.9100 IN. |
| 150.000 | 160.000 | 85.000 | 15.000 | BREF 936.6800 IN. |
| 150.000 | 160.000 | .000 | 100.000 | XMRF 1076.7000 IN. |
| | | | | YMRF .0000 IN. |
| | | | | ZMRF 375.0000 IN. |
| | | | | SCALE .0100 |

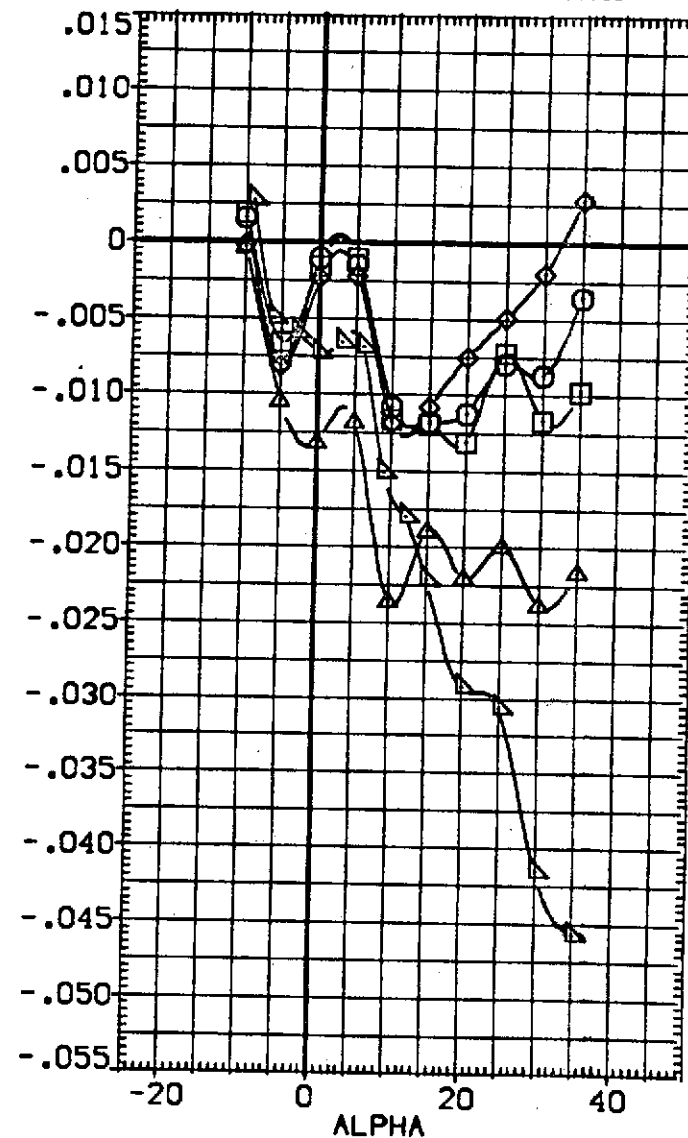
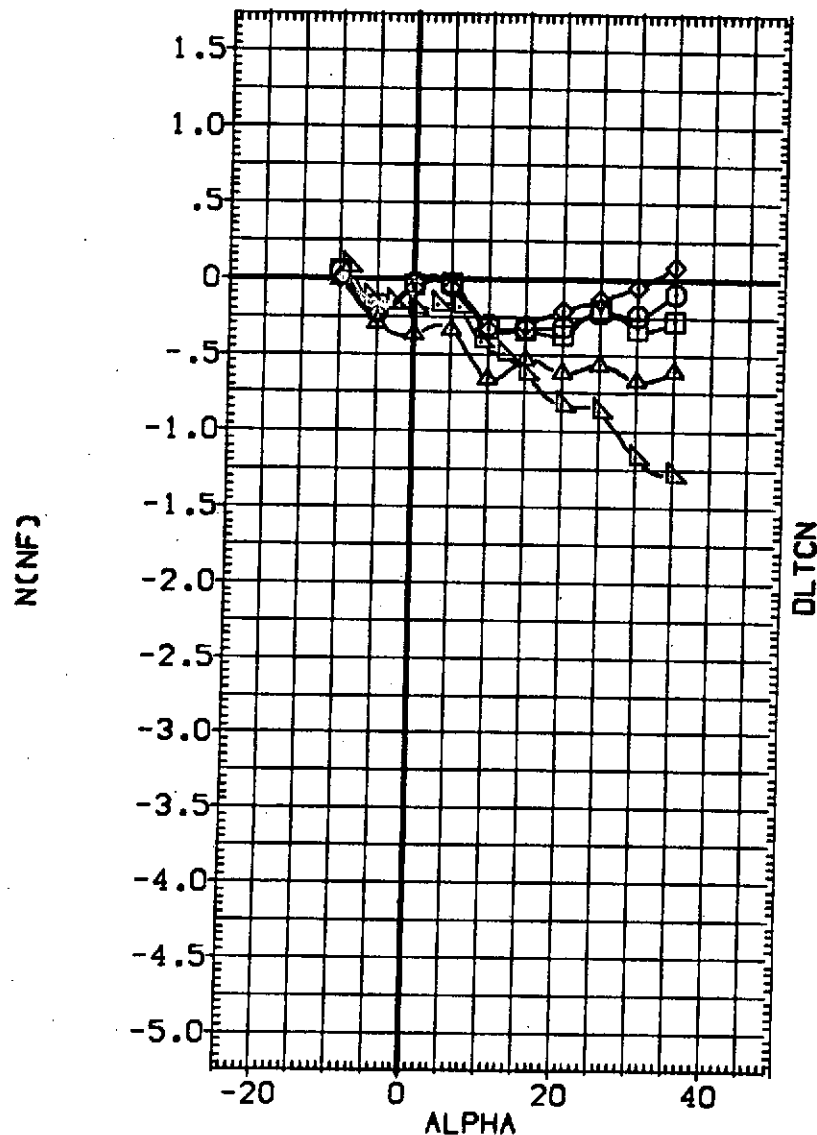


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS
(A)MACH = 10.30

DATA SET SYMBOL CONFIGURATION DESCRIPTION

| | | |
|----------|---|---|
| (CHLD10) | □ | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD02) | □ | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD08) | ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLD03) | ◇ | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (MIXED GAS) |
| (CHLC11) | △ | 0A82 CFHT113 MODEL 32-0 ORB V/N85 (AIR) |

| Q(PSF) | PCRC | PCHE | PCTAR | REFERENCE INFORMATION | |
|---------|---------|---------|---------|-----------------------|------------------|
| 150.000 | 160.000 | 100.000 | .000 | SREF | 2690.0000 SQ.FT. |
| 150.000 | 160.000 | 90.000 | 10.000 | LREF | 474.8100 IN. |
| 150.000 | 160.000 | 85.000 | 15.000 | BREF | 936.6800 IN. |
| 150.000 | 160.000 | .000 | 100.000 | XMRP | 1076.7000 IN. |
| 150.000 | 158.000 | | | YMRP | .0000 IN. |
| | | | | ZMRP | 375.0000 IN. |
| | | | | SCALE | .0100 |

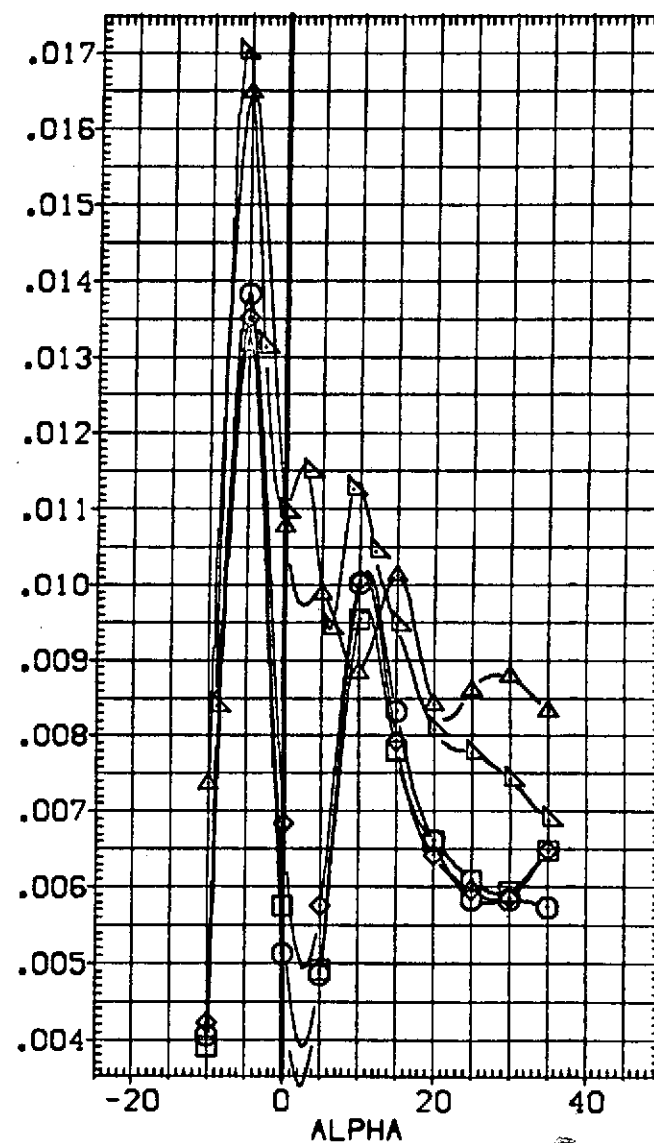
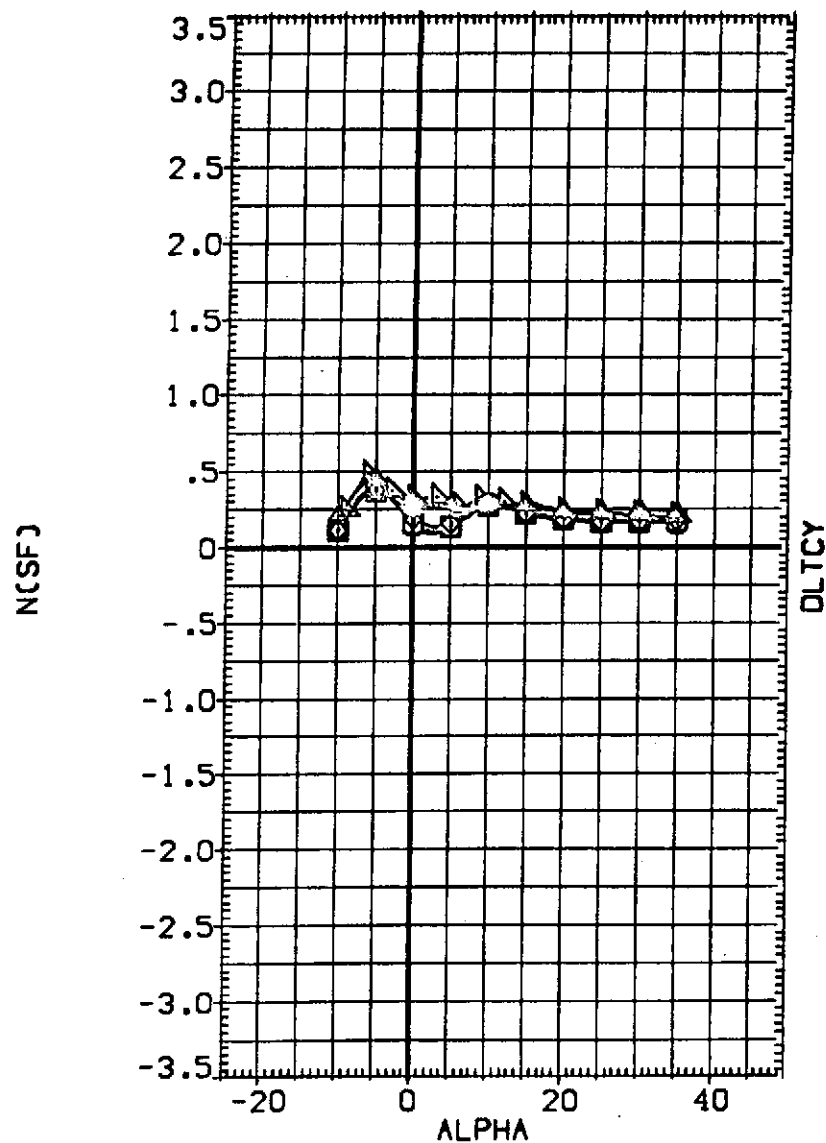


FIG. 32 EFFECT OF RCS RT RATIO ON AERO CHARACT., N85 JETS
(A) MACH = 10.30

APPENDIX
TABULATED SOURCE DATA

Tabulations of plotted data are available on request from
Data Management Services

DATE 31 OCT 74

TABULATED SOURCE DATA - OA82

PAGE 1

OA82 CFHT113 MODEL 32-O CRB W/N49 RCS OFF

(RHLFOO) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q(PSF) = 150.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.000
 PCTHE = .000 PCTAR = .000

RUN NO. 3/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | BETA | ALPHA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|--------|---------|---------|---------|---------|---------|---------|
| 10.330 | -5.096 | -.24319 | 150.49862 | -.05534 | .07787 | -.03103 | -.00033 | .00341 | .04673 | .82179 | -.70428 |
| 10.330 | -3.087 | -.24217 | 150.51183 | -.05413 | .07642 | -.03172 | -.00035 | .00299 | .02741 | .73809 | -.70201 |
| 10.330 | .069 | -.24126 | 150.64384 | -.05376 | .07549 | -.03188 | .00012 | -.00047 | -.00246 | .98965 | -.70580 |
| 10.330 | 2.982 | -.24257 | 150.70650 | -.05658 | .07610 | -.03114 | .00082 | -.00392 | -.02913 | .73844 | -.73702 |
| 10.330 | 4.867 | -.24396 | 150.53354 | -.05694 | .07948 | -.03076 | .00076 | -.00558 | -.04891 | .73809 | -.70993 |
| | GRADIENT | -.00023 | .00772 | -.00041 | .00032 | .00013 | .00014 | -.00109 | -.00934 | -.00786 | -.00239 |

OA82 CFHT113 MODEL 32-O CRB W/N49 RCS OFF

(RHLFO1) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.000
 PCTHE = .000 PCTAR = .000

RUN NO. 4/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.330 | -9.508 | -.06163 | 150.52684 | -.18719 | .10648 | -.04820 | .00048 | -.00033 | -.00171 | .82179 | -1.22872 |
| 10.330 | -6.422 | -.05963 | 150.52771 | -.14542 | .09617 | -.03882 | .00019 | -.00045 | -.00148 | .90564 | -1.19607 |
| 10.330 | -3.366 | -.06035 | 150.57324 | -.09910 | .08423 | -.03605 | .00020 | -.00046 | -.00139 | .90332 | -1.04539 |
| 10.330 | -.181 | -.06131 | 150.57498 | -.05359 | .07536 | -.03179 | .00012 | -.00040 | -.00129 | .90564 | -.70637 |
| 10.330 | 3.035 | -.06103 | 150.75228 | -.00826 | .07035 | -.02498 | .00007 | -.00048 | -.00095 | .82229 | -1.17150 |
| 10.330 | 5.880 | -.06017 | 150.58657 | .03951 | .06645 | -.01947 | .00004 | -.00046 | -.00099 | .82179 | .46322 |
| 10.330 | 8.932 | -.06183 | 150.72667 | .10047 | .06420 | -.01421 | -.00003 | -.00060 | -.00133 | .73861 | 1.12982 |
| 10.330 | 12.031 | -.06078 | 150.61979 | .18033 | .06335 | -.01213 | -.00008 | -.00078 | -.00161 | .82193 | 1.63782 |
| 10.330 | 15.092 | -.05943 | 150.54614 | .27209 | .06177 | -.01081 | -.00020 | -.00088 | -.00222 | .90548 | 1.89017 |
| 10.330 | 20.269 | -.05709 | 150.62698 | .43115 | .06258 | -.00907 | -.00037 | -.00111 | -.00346 | .90548 | 1.86758 |
| 10.330 | 25.377 | -.05554 | 150.56168 | .65947 | .06325 | -.01323 | -.00072 | -.00113 | -.00542 | .90548 | 1.67381 |
| 10.330 | 30.304 | -.05491 | 150.57897 | .88902 | .06308 | -.02422 | -.00112 | -.00117 | -.00688 | .98949 | 1.45165 |
| 10.330 | 35.597 | -.05411 | 150.53119 | 1.13306 | .06245 | -.04127 | -.00182 | -.00129 | -.00893 | .90548 | 1.24590 |
| | GRADIENT | -.00011 | .02801 | .01419 | -.00217 | .00173 | -.00002 | -.00000 | .00007 | -.01299 | .13657 |

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QA82 CFHT113 MODEL 32-O CRB W/N84 RCS OFF

(RHLE02) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q(PSF) = 150.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.000
 PCTHE = .000 PCTAR = .000

RUN NO. 19/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | BETA | ALPHA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|--------|---------|---------|---------|---------|---------|---------|
| 10.330 | -5.140 | -.23877 | 150.11854 | -.05314 | .07597 | -.03019 | -.00048 | .00524 | .04654 | 1.07317 | -.69320 |
| 10.330 | -2.999 | -.23726 | 150.16244 | -.05171 | .07479 | -.03075 | -.00030 | .00274 | .02607 | 1.15686 | -.68326 |
| 10.330 | .027 | -.23713 | 150.29383 | -.05264 | .07354 | -.03085 | .00012 | -.00047 | -.00161 | 1.07332 | -.70954 |
| 10.330 | 3.045 | -.23748 | 150.31917 | -.05486 | .07483 | -.02987 | .00059 | -.00380 | -.02902 | 1.15700 | -.72631 |
| 10.330 | 4.888 | -.23959 | 150.30376 | -.05614 | .07719 | -.02957 | .00072 | -.00537 | -.04784 | 1.15715 | -.72092 |
| | GRADIENT | -.00025 | .01775 | -.00058 | .00029 | .00017 | .00013 | -.00104 | -.00932 | .00285 | -.05486 |

QA82 CFHT113 MODEL 32-O CRB W/N84 RCS OFF

(RHLE03) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.000
 PCTHE = .000 PCTAR = .000

RUN NO. 20/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.330 | -9.542 | -.08363 | 150.19705 | -.18279 | .10464 | -.04644 | .00044 | -.00038 | -.00141 | 1.15700 | -1.22040 |
| 10.330 | -6.191 | -.08397 | 150.12193 | -.13907 | .09322 | -.03751 | .00021 | -.00049 | -.00096 | 1.07165 | -1.19071 |
| 10.330 | -3.271 | -.08298 | 150.16831 | -.09425 | .08244 | -.03423 | .00022 | -.00046 | -.00117 | 1.15700 | -1.01947 |
| 10.330 | -.237 | -.08280 | 150.07734 | -.05191 | .07389 | -.03106 | .00012 | -.00036 | -.00126 | 1.15671 | -.69642 |
| 10.330 | 2.830 | -.08369 | 150.12184 | -.00888 | .06938 | -.02503 | .00010 | -.00042 | -.00101 | 1.07302 | -.17856 |
| 10.330 | 5.993 | -.08213 | 150.12894 | .04190 | .06539 | -.01904 | .00006 | -.00041 | -.00103 | 1.15656 | .50210 |
| 10.330 | 8.976 | -.08280 | 150.11830 | .09880 | .06264 | -.01444 | .00000 | -.00052 | -.00109 | 1.15686 | 1.13616 |
| 10.330 | 11.881 | -.08167 | 150.26598 | .17029 | .06199 | -.01233 | -.00007 | -.00067 | -.00145 | 1.07348 | 1.60766 |
| 10.330 | 15.038 | -.08016 | 150.25642 | .23957 | .06038 | -.01086 | -.00016 | -.00075 | -.00193 | 1.07348 | 1.87022 |
| 10.330 | 20.313 | -.07768 | 150.05081 | .44121 | .06174 | -.00978 | -.00031 | -.00091 | -.00362 | 1.15671 | 1.85884 |
| 10.330 | 25.284 | -.07606 | 150.20482 | .63727 | .06202 | -.01334 | -.00057 | -.00100 | -.00434 | 1.07302 | 1.67470 |
| 10.330 | 30.386 | -.07209 | 150.04961 | .85772 | .06118 | -.02343 | -.00096 | -.00096 | -.00708 | 1.15656 | 1.45686 |
| 10.330 | 35.547 | -.07047 | 150.14359 | 1.10085 | .06162 | -.03924 | -.00137 | -.00107 | -.00912 | .98965 | 1.24594 |
| | GRADIENT | -.00012 | -.00761 | .01399 | -.00214 | .00151 | -.00002 | .00001 | .00003 | -.01379 | .13789 |

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TABULATED SOURCE DATA - 0A82

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0A82 CFHT113 MODEL 32-0 CRB W/N85 RCS OFF

(RHLFO4) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.000
 PCTHE = .000 PCTAR = .000

RUN NO. 27/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| NACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|--------|----------|
| 10.330 | -9.464 | -.02233 | 149.12026 | -.19037 | .10875 | -.04903 | .00048 | -.00045 | -.00234 | .73827 | -1.22603 |
| 10.330 | -6.205 | -.02131 | 149.19353 | -.14492 | .09762 | -.03914 | .00021 | -.00032 | -.00214 | .73844 | -1.18456 |
| 10.330 | -3.254 | -.02181 | 149.16194 | -.09804 | .08553 | -.03649 | .00019 | -.00037 | -.00199 | .73844 | -1.02275 |
| 10.330 | -.244 | -.02191 | 149.11837 | -.05577 | .07708 | -.03267 | .00011 | -.00033 | -.00203 | .73844 | -.71712 |
| 10.330 | 2.893 | -.01974 | 149.14232 | -.00935 | .07201 | -.02573 | .00007 | -.00060 | -.00180 | .82212 | -.18182 |
| 10.330 | 5.911 | -.02080 | 148.98580 | .04056 | .06760 | -.01978 | .00001 | -.00060 | -.00186 | .73809 | .46746 |
| 10.330 | 8.903 | -.01933 | 149.10695 | .10217 | .06544 | -.01445 | -.00009 | -.00075 | -.00201 | .73844 | 1.12967 |
| 10.330 | 12.104 | -.01905 | 149.14649 | .18561 | .06402 | -.01193 | -.00014 | -.00103 | -.00192 | .82195 | 1.65546 |
| 10.330 | 15.084 | -.01713 | 148.97321 | .27496 | .06295 | -.00995 | -.00026 | -.00113 | -.00230 | .82162 | 1.88543 |
| 10.330 | 20.261 | -.01640 | 148.98018 | .46116 | .06388 | -.00872 | -.00047 | -.00135 | -.00360 | .82145 | 1.86911 |
| 10.330 | 25.318 | -.01780 | 149.05920 | .66925 | .06473 | -.01300 | -.00083 | -.00141 | -.00508 | .90564 | 1.67469 |
| 10.330 | 30.624 | -.02017 | 148.95133 | .91746 | .06431 | -.02345 | -.00137 | -.00142 | -.00641 | .73792 | 1.44775 |
| 10.330 | 35.566 | -.02245 | 149.18949 | 1.15657 | .06340 | -.04284 | -.00185 | -.00162 | -.00800 | .65493 | 1.24804 |
| | GRADIENT | .00034 | -.00312 | .01443 | -.00220 | .00175 | -.00002 | -.00001 | .00003 | .01370 | .13707 |

QA82 CFHT113 MODEL 32-Q CR8 W/N49 RCS OFF

(RHLFD5) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = .000 YCRC5 = .000
 T/QA = .000 RN/L = .850
 PCTHE = .000 PCTAR = .000

RUN NO. 31/ 0 RN/L = .80 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|--------|----------|
| 10.320 | -9.428 | -.02395 | 124.12371 | -.19056 | .10955 | -.04802 | .00049 | -.00027 | -.00165 | .73775 | -1.22078 |
| 10.320 | -6.185 | -.02187 | 124.10604 | -.14386 | .09871 | -.03911 | .00026 | -.00038 | -.00161 | .82128 | -1.16506 |
| 10.320 | -3.282 | -.02229 | 124.22492 | -.09789 | .08650 | -.03720 | .00021 | -.00040 | -.00168 | .73809 | -1.00885 |
| 10.320 | -.321 | -.02234 | 124.26603 | -.05565 | .07867 | -.03271 | .00014 | -.00037 | -.00165 | .65458 | -.69898 |
| 10.320 | 2.801 | -.02196 | 124.26319 | -.00973 | .07384 | -.02607 | .00007 | -.00045 | -.00150 | .82179 | -.18221 |
| 10.320 | 5.943 | -.02168 | 124.11768 | .04414 | .07010 | -.02005 | .00004 | -.00048 | -.00158 | .82145 | .49321 |
| 10.320 | 8.818 | -.02072 | 124.25071 | .10028 | .06837 | -.01489 | -.00007 | -.00063 | -.00197 | .82162 | 1.09511 |
| 10.320 | 11.981 | -.02047 | 124.28193 | .18214 | .06647 | -.01253 | -.00017 | -.00081 | -.00208 | .73827 | 1.59851 |
| 10.320 | 15.036 | -.01952 | 124.22362 | .27347 | .06408 | -.01089 | -.00022 | -.00099 | -.00230 | .73792 | 1.86321 |
| 10.320 | 20.140 | -.01778 | 124.13771 | .45625 | .06532 | -.00939 | -.00045 | -.00116 | -.00367 | .65404 | 1.85818 |
| 10.320 | 25.335 | -.01664 | 124.28089 | .67123 | .06690 | -.01349 | -.00081 | -.00120 | -.00551 | .65458 | 1.66253 |
| 10.320 | 30.406 | -.01917 | 124.10077 | .90712 | .06665 | -.02423 | -.00117 | -.00124 | -.00738 | .82145 | 1.44912 |
| 10.320 | 35.448 | -.02012 | 124.21547 | 1.15164 | .06625 | -.04138 | -.00160 | -.00136 | -.00915 | .82162 | 1.24638 |
| | GRADIENT | .00005 | .00623 | .01449 | -.00211 | .00183 | -.00002 | -.00001 | .00003 | .01412 | .13616 |

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TABULATED SOURCE DATA - OA82

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OA82 CFHT113 MODEL 32-O CRB W/N32 RCS OFF

(RMLF06) (03 SEP 74)

REFERENCE DATA

BREF = 2090.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREP = 474.6100 IN. YMRP = .0000 IN.
 BREP = 936.8800 IN. ZMRP = 378.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 100.000
 PCRC8 = .000 TCRC8 = .000
 T/QA = .000 RN/L = .720
 PCTHE = .000 PCTAR = .000

RUN NO. 38/ 0 RN/L = .86 GRADIENT INTERVAL = -8.00/ 8.00

| NACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CSL | CYN | CY | PCRC8 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.310 | -9.433 | -.02179 | 100.08928 | -.18991 | .10929 | -.04688 | .00036 | -.00019 | -.00081 | 1.32382 | -1.19670 |
| 10.310 | -6.261 | -.02244 | 100.22357 | -.14391 | .09847 | -.03788 | .00022 | -.00032 | -.00037 | 1.24034 | -1.16191 |
| 10.310 | -3.304 | -.02056 | 100.21422 | -.09453 | .08664 | -.03619 | .00020 | -.00023 | -.00104 | 1.32436 | -.97231 |
| 10.310 | -.193 | -.01981 | 100.30864 | -.05114 | .07822 | -.03129 | .00012 | -.00026 | -.00096 | 1.32436 | -.65004 |
| 10.310 | 2.756 | -.02016 | 100.32003 | -.00890 | .07385 | -.02529 | .00007 | -.00033 | -.00097 | 1.07332 | -.16965 |
| 10.310 | 5.934 | -.01987 | 100.19797 | .04437 | .06991 | -.01983 | .00004 | -.00035 | -.00120 | 1.32382 | .49792 |
| 10.310 | 8.829 | -.01871 | 100.20760 | .10286 | .06780 | -.01513 | .00000 | -.00043 | -.00155 | 1.40791 | 1.10216 |
| 10.310 | 12.033 | -.01871 | 100.18950 | .18226 | .06713 | -.01288 | -.00009 | -.00057 | -.00164 | 1.32393 | 1.38473 |
| 10.310 | 15.000 | -.01756 | 100.13817 | .27346 | .06613 | -.01137 | -.00021 | -.00069 | -.00215 | 1.32393 | 1.83458 |
| 10.310 | 19.985 | -.01633 | 100.16270 | .44188 | .06737 | -.00989 | -.00036 | -.00084 | -.00323 | 1.32393 | 1.83002 |
| 10.310 | 25.306 | -.01780 | 100.18200 | .65336 | .06818 | -.01300 | -.00070 | -.00093 | -.00493 | 1.32409 | 1.64823 |
| 10.310 | 30.413 | -.01731 | 100.27199 | .87823 | .06737 | -.02316 | -.00104 | -.00104 | -.00629 | 1.32422 | 1.43872 |
| 10.310 | 35.485 | -.01728 | 100.08321 | 1.12238 | .06710 | -.03854 | -.00137 | -.00118 | -.00830 | 1.32393 | 1.23903 |
| | GRADIENT | .00007 | .01783 | .01413 | -.00212 | .00180 | -.00002 | -.00001 | .00001 | -.04086 | .13204 |

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OA82 CFHT113 MODEL 32-0 CRB W/N49 RCS OFF

(RMLF07) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 75.000
 PCRS = .000 TCRC = .000
 T/QA = .000 RN/L = .500
 PCTHE = .000 PCTAR = .000

RUN NO. 39/ 0 RN/L = .46 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRS | L/D |
|--------|----------|---------|----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.300 | -9.435 | -.02376 | 74.19847 | -.19006 | .11324 | -.04478 | .00046 | -.00021 | -.00037 | 1.15671 | -1.18241 |
| 10.300 | -8.210 | -.02227 | 74.18687 | -.14464 | .10116 | -.03744 | .00034 | -.00031 | -.00025 | 1.24012 | -1.14313 |
| 10.300 | -3.204 | -.02282 | 74.17556 | -.09454 | .08884 | -.03580 | .00023 | -.00027 | -.00061 | 1.15642 | -.95157 |
| 10.300 | -.171 | -.02252 | 74.17397 | -.03112 | .08196 | -.03065 | .00020 | -.00031 | -.00103 | 1.24026 | -.61950 |
| 10.300 | 2.858 | -.02241 | 74.19617 | -.00620 | .07756 | -.02457 | .00016 | -.00031 | -.00105 | 1.32395 | -.13043 |
| 10.300 | 5.868 | -.02343 | 74.16140 | .04443 | .07518 | -.02020 | .00005 | -.00038 | -.00083 | 1.24012 | .46030 |
| 10.300 | 8.876 | -.02166 | 74.17054 | .10317 | .07203 | -.01521 | -.00001 | -.00048 | -.00136 | 1.24040 | 1.04286 |
| 10.300 | 11.947 | -.02129 | 74.15853 | .17689 | .06964 | -.01377 | -.00009 | -.00058 | -.00132 | 1.24012 | 1.51457 |
| 10.300 | 15.094 | -.02144 | 74.13552 | .27236 | .06956 | -.01195 | -.00023 | -.00069 | -.00165 | 1.15642 | 1.77315 |
| 10.300 | 20.183 | -.02066 | 74.22333 | .44901 | .07085 | -.01030 | -.00044 | -.00085 | -.00249 | 1.15696 | 1.79491 |
| 10.300 | 25.099 | -.02095 | 74.16994 | .64569 | .07172 | -.01321 | -.00068 | -.00086 | -.00341 | 1.15656 | 1.63590 |
| 10.300 | 30.189 | -.02064 | 74.21786 | .86736 | .07188 | -.02149 | -.00105 | -.00093 | -.00523 | 1.07332 | 1.43205 |
| 10.300 | 35.336 | -.02009 | 74.22590 | 1.11341 | .07184 | -.03568 | -.00136 | -.00117 | -.00673 | 1.15700 | 1.23369 |
| | GRADIENT | .00007 | .00340 | .01457 | -.00188 | .00185 | -.00001 | -.00001 | -.00007 | .02764 | .13545 |

DATE 31 OCT 74

TABULATED SOURCE DATA - OA82

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OA82 CPHT113 MODEL 32-O CRB W/N49 RCS OFF

(RMLF08) (03 SEP 74)

REFERENCE DATA

BREF = 2890.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 200.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.350
 PCYHE = .000 PCTAR = .000

RUN NO. 43/ D RN/L = 1.25 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.340 | -9.536 | -.02290 | 198.09604 | -.18030 | .10104 | -.04679 | .00045 | -.00051 | -.00283 | .73844 | -1.24369 |
| 10.340 | -6.478 | -.02140 | 198.06321 | -.14088 | .09177 | -.03803 | .00022 | -.00055 | -.00264 | .90581 | -1.21063 |
| 10.340 | -3.404 | -.02153 | 197.84685 | -.09654 | .08253 | -.03316 | .00023 | -.00062 | -.00244 | .90516 | -1.03602 |
| 10.340 | -.327 | -.02109 | 197.98734 | -.05495 | .07295 | -.02997 | .00011 | -.00059 | -.00229 | .90564 | -.74433 |
| 10.340 | 2.846 | -.01992 | 197.83543 | -.00878 | .06746 | -.02460 | .00005 | -.00068 | -.00202 | 1.07302 | -.18098 |
| 10.340 | 5.939 | -.01972 | 197.74332 | .03986 | .06276 | -.01863 | -.00001 | -.00069 | -.00211 | .98986 | .49817 |
| 10.340 | 9.004 | -.01837 | 197.67651 | .09978 | .06030 | -.01368 | -.00011 | -.00084 | -.00246 | .98870 | 1.18540 |
| 10.340 | 12.072 | -.01793 | 197.67118 | .17564 | .05967 | -.01161 | -.00013 | -.00107 | -.00237 | .98986 | 1.67132 |
| 10.340 | 15.070 | -.01737 | 197.84803 | .26151 | .05824 | -.01007 | -.00025 | -.00117 | -.00258 | .90581 | 1.91084 |
| 10.340 | 20.410 | -.01690 | 197.74249 | .44621 | .05957 | -.00929 | -.00045 | -.00133 | -.00406 | .90564 | 1.87964 |
| 10.340 | 25.429 | -.01683 | 197.52178 | .64499 | .05970 | -.01327 | -.00083 | -.00137 | -.00556 | .98902 | 1.68305 |
| 10.340 | 30.681 | -.02147 | 197.63513 | .87467 | .05944 | -.02435 | -.00137 | -.00158 | -.00706 | .90564 | 1.45128 |
| 10.340 | 35.867 | -.02449 | 197.52295 | 1.12001 | .05893 | -.04181 | -.00191 | -.00158 | -.00893 | .98902 | 1.24024 |
| | GRADIENT | .00026 | -.00207 | .01404 | -.00241 | .00137 | -.00003 | -.00001 | .00007 | .02699 | .13734 |

QA82 CFHT113 MODEL 32-0 ORB W/N52 RCS OFF

(RHLF09) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = .850
 PCTHE = .000 PCTAR = .000

RUN NO. 52/ 0 RN/L = .80 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.320 | -9.335 | -.02575 | 124.49340 | -.18374 | .10560 | -.04562 | .00042 | -.00035 | -.00185 | .98839 | -1.22510 |
| 10.320 | -8.321 | -.02682 | 124.56979 | -.14408 | .09541 | -.03700 | .00021 | -.00048 | -.00155 | .90499 | -1.15886 |
| 10.320 | -3.363 | -.02413 | 124.47586 | -.09846 | .08434 | -.03539 | .00023 | -.00047 | -.00214 | 1.07241 | -1.01660 |
| 10.320 | -.256 | -.02434 | 124.59140 | -.05322 | .07626 | -.03097 | .00011 | -.00043 | -.00190 | .90516 | -.69131 |
| 10.320 | 2.714 | -.02344 | 124.43769 | -.01094 | .07120 | -.02510 | .00008 | -.00049 | -.00170 | .98839 | -.20237 |
| 10.320 | 5.981 | -.02310 | 124.46942 | .04151 | .06719 | -.01913 | .00003 | -.00054 | -.00170 | .98823 | .48181 |
| 10.320 | 8.967 | -.02411 | 124.51586 | .10031 | .06479 | -.01432 | -.00006 | -.00069 | -.00183 | .98835 | 1.11748 |
| 10.320 | 11.987 | -.02325 | 124.47358 | .17641 | .06476 | -.01238 | -.00012 | -.00084 | -.00202 | .98835 | 1.59128 |
| 10.320 | 14.921 | -.02370 | 124.56961 | .26212 | .06286 | -.01103 | -.00020 | -.00098 | -.00210 | .98886 | 1.84894 |
| 10.320 | 20.196 | -.02202 | 124.45531 | .44380 | .06381 | -.00988 | -.00041 | -.00111 | -.00336 | 1.07211 | 1.85092 |
| 10.320 | 25.254 | -.02404 | 124.62985 | .64129 | .06432 | -.01232 | -.00073 | -.00120 | -.00453 | .98902 | 1.66545 |
| 10.320 | 30.314 | -.02339 | 124.55888 | .86703 | .06416 | -.02284 | -.00109 | -.00121 | -.00600 | .98839 | 1.45250 |
| 10.320 | 35.475 | -.02395 | 124.46410 | 1.11194 | .06425 | -.03872 | -.00144 | -.00134 | -.00793 | .98835 | 1.24457 |
| | GRADIENT | .00011 | -.00395 | .01407 | -.00217 | .00169 | -.00002 | -.00000 | .00007 | -.01413 | .13373 |

QA82 CFHT113 MODEL 32-0 ORB W/N49 RCS OFF

(RHLF10) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.000
 PCTHE = .000 PCTAR = .000

RUN NO. 65/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.330 | -10.498 | -.02341 | 149.40836 | -.19720 | .10827 | -.05004 | .00046 | -.00031 | -.00169 | 1.57491 | -1.24297 |
| 10.330 | -5.373 | -.02330 | 149.35016 | -.12806 | .09301 | -.03672 | .00020 | -.00048 | -.00161 | 1.49109 | -1.13574 |
| 10.330 | -.351 | -.02251 | 149.46392 | -.05521 | .07553 | -.03189 | .00011 | -.00038 | -.00141 | 1.49159 | -.72158 |
| 10.330 | 4.844 | -.02087 | 149.32278 | .02280 | .06720 | -.02144 | .00003 | -.00047 | -.00108 | 1.57491 | .24748 |
| 10.330 | 10.030 | -.01901 | 149.47751 | .12631 | .06361 | -.01334 | -.00007 | -.00076 | -.00141 | 1.49121 | 1.33860 |
| 10.330 | 15.088 | -.01873 | 149.45431 | .26666 | .06135 | -.01018 | -.00021 | -.00102 | -.00167 | 1.57503 | 1.87879 |
| 10.330 | 20.180 | -.01848 | 149.54848 | .44299 | .06276 | -.00879 | -.00045 | -.00123 | -.00304 | 1.49159 | 1.86164 |
| 10.330 | 25.445 | -.01901 | 149.52085 | .65705 | .06330 | -.01290 | -.00080 | -.00130 | -.00466 | 1.49159 | 1.66769 |
| 10.330 | 30.601 | -.02140 | 149.58730 | .88909 | .06359 | -.02433 | -.00127 | -.00131 | -.00598 | 1.57515 | 1.44462 |
| 10.330 | 35.583 | -.02253 | 149.59941 | 1.12553 | .06280 | -.04064 | -.00172 | -.00149 | -.00740 | 1.49134 | 1.24479 |
| | GRADIENT | .00032 | -.02717 | .01502 | -.00160 | .00201 | -.00001 | -.00002 | .00007 | .01604 | .18634 |

DATE 31 OCT 74

TABULATED SOURCE DATA - OA82

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OA82 CFHT113 MODEL 32-O ORB W/N85 RCS OFF

(RHLF11) (03 SEP 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.000
 PCTHE = .000 PCTAR = .000

RUN NO. 89/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.330 | -10.490 | -.02442 | 149.50182 | -.19978 | .10950 | -.05182 | .00055 | -.00037 | -.00279 | 1.40752 | -1.22536 |
| 10.330 | -5.240 | -.02391 | 149.61706 | -.12818 | .09473 | -.03782 | .00025 | -.00050 | -.00233 | 1.40765 | -1.12211 |
| 10.330 | -.232 | -.02256 | 149.42386 | -.05300 | .07686 | -.03282 | .00011 | -.00049 | -.00227 | 1.40738 | -.68365 |
| 10.330 | 4.842 | -.02225 | 149.54681 | .02272 | .06893 | -.02197 | .00002 | -.00035 | -.00195 | 1.40765 | .23824 |
| 10.330 | 10.047 | -.02042 | 149.52494 | .13100 | .06477 | -.01357 | -.00009 | -.00082 | -.00240 | 1.49121 | 1.35846 |
| 10.330 | 15.096 | -.01987 | 149.47712 | .27591 | .06220 | -.01010 | -.00024 | -.00113 | -.00262 | 1.40738 | 1.89656 |
| 10.330 | 20.127 | -.01867 | 149.70034 | .45382 | .06375 | -.00876 | -.00047 | -.00131 | -.00363 | 1.40791 | 1.87102 |
| 10.330 | 25.462 | -.02028 | 149.57157 | .67775 | .06434 | -.01365 | -.00080 | -.00133 | -.00572 | 1.49121 | 1.67188 |
| 10.330 | 30.563 | -.02164 | 149.55553 | .91242 | .06448 | -.02547 | -.00130 | -.00132 | -.00721 | 1.49121 | 1.44928 |
| 10.330 | 35.460 | -.02386 | 149.66852 | 1.14914 | .06357 | -.04257 | -.00176 | -.00148 | -.00865 | 1.40765 | 1.25148 |
| | GRADIENT | .00006 | .02423 | .01492 | -.00156 | .00214 | -.00002 | -.00001 | .00006 | .00005 | .18169 |

OA82 CFHT113 MODEL 32-O ORB W/N49 RCS OFF

(RHLF12) (03 SEP 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = .000 TCRC5 = .000
 T/QA = .000 RN/L = 1.000
 PCTHE = .000 PCTAR = .000

RUN NO. 76/ 0 RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.330 | -10.407 | -.02495 | 149.28884 | -.19855 | .10696 | -.05003 | .00047 | -.00029 | -.00139 | 1.57515 | -1.24759 |
| 10.330 | -5.389 | -.02373 | 149.26503 | -.13037 | .09361 | -.03694 | .00020 | -.00043 | -.00126 | 1.40778 | -1.14761 |
| 10.330 | -.240 | -.02325 | 149.25402 | -.05384 | .07566 | -.03190 | .00010 | -.00036 | -.00141 | 1.57491 | -.70528 |
| 10.330 | 4.894 | -.02339 | 149.17919 | .02281 | .06755 | -.02135 | .00005 | -.00043 | -.00126 | 1.57491 | .24503 |
| 10.330 | 10.089 | -.02098 | 149.34597 | .12764 | .06410 | -.01336 | -.00009 | -.00070 | -.00165 | 1.57528 | 1.33898 |
| 10.330 | 15.086 | -.01936 | 149.36602 | .26778 | .06139 | -.01007 | -.00028 | -.00097 | -.00216 | 1.57540 | 1.88086 |
| 10.330 | 20.204 | -.02010 | 149.30082 | .44583 | .06253 | -.00874 | -.00044 | -.00119 | -.00337 | 1.57503 | 1.86597 |
| 10.330 | 25.318 | -.01834 | 149.32213 | .65637 | .06376 | -.01276 | -.00078 | -.00121 | -.00531 | 1.49172 | 1.67310 |
| 10.330 | 30.581 | -.02134 | 149.32715 | .89052 | .06322 | -.02394 | -.00121 | -.00124 | -.00672 | 1.57528 | 1.44734 |
| 10.330 | 35.585 | -.02152 | 149.15403 | 1.13505 | .06328 | -.04089 | -.00166 | -.00138 | -.00882 | 1.57491 | 1.24480 |
| | GRADIENT | -.00003 | -.01458 | .01493 | -.00158 | .00205 | -.00001 | -.00001 | .00003 | -.00000 | .18510 |

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QA82 CFHT113 MODEL 32-O ORB W/N80 RCS OFF

(RHLF13) (03 SEP 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 125.000
 PCRC8 = .000 TCRC8 = .000
 T/QA = .000 RN/L = .050
 PCTHE = .000 PCTAR = .000

RUN NO. 80/ 0 RN/L = .79 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CSL | CYN | CY | PCRC8 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.320 | -9.437 | -.02653 | 124.06240 | -.19034 | .10935 | -.04844 | .00045 | -.00019 | -.00186 | 1.24026 | -1.22112 |
| 10.320 | -6.377 | -.02695 | 124.06221 | -.14744 | .09907 | -.03927 | .00021 | -.00031 | -.00163 | 1.32362 | -1.16016 |
| 10.320 | -3.129 | -.02610 | 124.15999 | -.09562 | .08616 | -.03650 | .00016 | -.00033 | -.00182 | 1.32409 | -.99472 |
| 10.320 | -.259 | -.02559 | 124.05487 | -.05349 | .07872 | -.03253 | .00012 | -.00028 | -.00199 | 1.32382 | -.67290 |
| 10.320 | 2.721 | -.02646 | 124.06426 | -.01097 | .07325 | -.02618 | .00007 | -.00039 | -.00131 | 1.32382 | -.19877 |
| 10.320 | 6.004 | -.02562 | 124.14564 | .04565 | .06958 | -.01959 | .00001 | -.00040 | -.00165 | 1.32395 | .51536 |
| 10.320 | 9.008 | -.02402 | 124.04629 | .10640 | .06657 | -.01469 | -.00011 | -.00054 | -.00226 | 1.32368 | 1.14872 |
| 10.320 | 12.073 | -.02477 | 124.16338 | .18349 | .06545 | -.01224 | -.00016 | -.00076 | -.00219 | 1.32409 | 1.61897 |
| 10.320 | 15.042 | -.02350 | 124.08662 | .27479 | .06383 | -.01060 | -.00024 | -.00082 | -.00282 | 1.32382 | 1.87133 |
| 10.320 | 20.174 | -.02201 | 124.00813 | .45693 | .06539 | -.00905 | -.00045 | -.00112 | -.00356 | 1.32382 | 1.85578 |
| 10.320 | 25.276 | -.02232 | 124.04632 | .66735 | .06680 | -.01309 | -.00081 | -.00126 | -.00485 | 1.32382 | 1.66591 |
| 10.320 | 30.483 | -.02316 | 124.14278 | .90498 | .06649 | -.02416 | -.00123 | -.00127 | -.00634 | 1.40791 | 1.44501 |
| 10.320 | 35.464 | -.02333 | 124.03878 | 1.14977 | .06604 | -.04119 | -.00164 | -.00144 | -.00790 | 1.32368 | 1.24590 |
| | GRADIENT | -.00006 | -.01624 | .01447 | -.00220 | .00177 | -.00002 | -.00001 | .00005 | -.00005 | .13621 |

DATE 31 OCT 74

TABULATED SOURCE DATA - QA82

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QA82 CFHT113 MODEL 32-O CRB W/N84 RCS OFF

(RHLF14) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = .000 TCRC5 = .000
 T/OA = .000 RN/L = .890
 PCTHE = .000 PCTAR = .000

RUN NO. 96/ 0 RN/L = .81 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|----------|
| 10.320 | -9.393 | -.02859 | 125.21014 | -.18981 | .10956 | -.04779 | .00045 | -.00029 | -.00167 | 1.07272 | -1.21800 |
| 10.320 | -6.328 | -.02723 | 125.08631 | -.14650 | .09908 | -.03910 | .00024 | -.00039 | -.00159 | 1.15598 | -1.17497 |
| 10.320 | -3.303 | -.02694 | 125.22377 | -.09903 | .08700 | -.03668 | .00021 | -.00043 | -.00176 | .90548 | -1.01416 |
| 10.320 | -.221 | -.02704 | 125.11243 | -.05493 | .07852 | -.03270 | .00013 | -.00039 | -.00170 | 1.07120 | -.69377 |
| 10.320 | 2.741 | -.02674 | 125.08954 | -.01038 | .07371 | -.02628 | .00009 | -.00042 | -.00179 | 1.07226 | -.18998 |
| 10.320 | 6.019 | -.02528 | 125.16989 | .04482 | .06977 | -.01986 | .00003 | -.00046 | -.00170 | 1.15627 | .50283 |
| 10.320 | 8.972 | -.02543 | 125.21681 | .10350 | .06676 | -.01462 | -.00006 | -.00063 | -.00202 | 1.07237 | 1.11859 |
| 10.320 | 11.955 | -.02489 | 125.12581 | .18099 | .06656 | -.01259 | -.00015 | -.00083 | -.00234 | 1.15598 | 1.59127 |
| 10.320 | 15.106 | -.02294 | 125.06236 | .27589 | .06437 | -.01091 | -.00025 | -.00100 | -.00241 | 1.15598 | 1.86184 |
| 10.320 | 20.137 | -.02276 | 125.09886 | .45607 | .06604 | -.00934 | -.00044 | -.00118 | -.00369 | 1.15612 | 1.85131 |
| 10.320 | 25.323 | -.02268 | 125.05013 | .66781 | .06671 | -.01320 | -.00081 | -.00123 | -.00524 | 1.23969 | 1.66245 |
| 10.320 | 30.458 | -.02274 | 125.10353 | .90439 | .06507 | -.02396 | -.00115 | -.00149 | -.00637 | 1.23969 | 1.45103 |
| GRADIENT | | .00003 | -.02230 | .01467 | -.00220 | .00172 | -.00002 | .00000 | -.00000 | .02777 | .13614 |

QA82 CFHT113 MODEL 32-O CRB W/N49 (AIR)

(RHL000) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q(PSF) = 150.000
 PCRC5 = 155.000 TCRC5 = 68.000
 T/OA = 47.500 RN/L = 1.000

RUN NO. 9/ 0 RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | BETA | ALPHA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|---------|
| 10.330 | -5.142 | -.22688 | 150.17339 | -.06587 | .07388 | -.02176 | -.00226 | .00204 | .05735 | 155.14433 | -.88478 |
| 10.330 | -3.007 | -.22413 | 150.18492 | -.06708 | .07247 | -.02142 | -.00270 | .00081 | .03402 | 154.98642 | -.91838 |
| 10.330 | .105 | -.22228 | 150.23128 | -.06755 | .07183 | -.02163 | -.00217 | -.00284 | .00510 | 155.22802 | -.93314 |
| 10.330 | 2.964 | -.22674 | 150.38159 | -.06780 | .07208 | -.02324 | -.00136 | -.00618 | -.01978 | 155.05116 | -.93316 |
| 10.330 | 4.868 | -.22855 | 150.22010 | -.06940 | .07308 | -.02319 | -.00124 | -.00761 | -.03877 | 154.98642 | -.94203 |
| GRADIENT | | -.00064 | .01174 | -.00026 | .00006 | -.00026 | .00020 | -.00109 | -.00917 | -.00452 | -.00268 |

QA02 CFHT113 MODEL 32-Q CR8 W/N49 (AIR)

(RHL001) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 130.000
 PCRC5 = 155.000 TCRC5 = 69.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 6/ 0 RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.522 | -.06107 | 150.41773 | -.19844 | .10149 | -.03631 | -.00111 | -.00417 | .01001 | 155.05116 | -1.34609 |
| 10.330 | -6.406 | -.06731 | 150.23954 | -.15610 | .08992 | -.03060 | -.00155 | -.00317 | .01030 | 155.24699 | -1.35885 |
| 10.330 | -3.287 | -.06849 | 150.26283 | -.10773 | .08020 | -.02710 | -.00151 | -.00326 | .00846 | 155.15381 | -1.19460 |
| 10.330 | -.268 | -.07191 | 150.26154 | -.08865 | .07156 | -.02172 | -.00222 | -.00250 | .00639 | 155.16329 | -.95033 |
| 10.330 | 3.059 | -.07348 | 150.33741 | -.02042 | .06843 | -.01508 | -.00252 | -.00242 | .00542 | 155.13485 | -.36694 |
| 10.330 | 6.044 | -.07508 | 150.29872 | .02892 | .06161 | -.00847 | -.00279 | -.00239 | .00576 | 155.16329 | .34629 |
| 10.330 | 9.021 | -.07976 | 150.36912 | .08763 | .05873 | -.00233 | -.00344 | -.00239 | .00609 | 154.96748 | 1.07797 |
| 10.330 | 11.935 | -.08513 | 150.45276 | .15533 | .05487 | .00177 | -.00383 | -.00204 | .00496 | 154.95801 | 1.63885 |
| 10.330 | 15.134 | -.08793 | 150.48486 | .25266 | .05471 | .00336 | -.00464 | -.00214 | .00609 | 154.87433 | 1.93146 |
| 10.330 | 20.279 | -.09016 | 150.36325 | .43502 | .05590 | .00433 | -.00498 | -.00236 | .00450 | 154.98642 | 1.91271 |
| 10.330 | 25.357 | -.09234 | 150.30790 | .64155 | .05663 | .00074 | -.00539 | -.00275 | .00351 | 154.90273 | 1.70435 |
| 10.330 | 30.500 | -.09542 | 150.48082 | .87051 | .05615 | -.00997 | -.00588 | -.00305 | .00278 | 154.80011 | 1.47200 |
| 10.330 | 35.598 | -.09986 | 150.53536 | 1.11871 | .05555 | -.02674 | -.00653 | -.00346 | .00125 | 154.88380 | 1.25986 |
| GRADIENT | | -.00078 | .01199 | .01381 | -.00217 | .00190 | -.00016 | .00013 | -.00048 | -.00310 | .13166 |

QA02 CFHT113 MODEL 32-Q CR8 W/N49N50 (ATR)

(RHL002) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q (PSF) = 130.000
 PCRC5 = 164.000 TCRC5 = 69.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 7/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | BETA | ALPHA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -5.113 | -.18241 | 151.18176 | -.08018 | .06226 | -.01042 | -.00017 | .00398 | .04653 | 164.16264 | -1.27946 |
| 10.330 | -3.040 | -.17143 | 151.15648 | -.08306 | .06203 | -.00980 | -.00061 | .00295 | .02450 | 163.92164 | -1.33071 |
| 10.330 | .096 | -.17741 | 150.98745 | -.08622 | .06111 | -.00797 | .00057 | -.00068 | -.00215 | 164.02339 | -1.40174 |
| 10.330 | 2.951 | -.17507 | 150.99803 | -.08274 | .06198 | -.00919 | .00151 | -.00418 | -.02709 | 163.94169 | -1.32638 |
| 10.330 | 4.881 | -.17635 | 151.21141 | -.08621 | .06165 | -.00805 | .00150 | -.00529 | -.04606 | 163.83795 | -1.38935 |
| GRADIENT | | -.00049 | .00328 | -.00021 | -.00001 | .00015 | .00028 | -.00107 | -.00886 | -.01085 | -.00355 |

DATE 31 OCT 74

TABULATED SOURCE DATA - OA82

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OA82 CFHT113 MODEL 32-O CR8 W/N49N50 (AIR)

(RHL003) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = 164.000 TCRC5 = 60.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 8/ D RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.340 | -.07757 | 151.18781 | -.21559 | .09169 | -.02368 | .00108 | -.00062 | -.00347 | 163.69060 | -1.57899 |
| 10.330 | -8.348 | -.08178 | 150.95932 | -.17091 | .07749 | -.01779 | .00060 | -.00007 | -.00115 | 163.86803 | -1.68173 |
| 10.330 | -3.323 | -.07840 | 151.14275 | -.12247 | .06966 | -.01507 | .00052 | -.00040 | -.00148 | 163.81791 | -1.54262 |
| 10.330 | -.158 | -.07801 | 151.08658 | -.08725 | .06141 | -.00788 | .00046 | -.00050 | -.00090 | 163.69061 | -1.41237 |
| 10.330 | 2.880 | -.07807 | 151.04407 | -.04301 | .05620 | -.00189 | .00022 | -.00039 | -.00134 | 163.68060 | -.84837 |
| 10.330 | 5.907 | -.07733 | 150.97485 | .00792 | .05159 | .00318 | .00019 | -.00044 | -.00130 | 163.84797 | .04924 |
| 10.330 | 9.054 | -.07738 | 150.98192 | .06948 | .04802 | .01154 | -.00036 | -.00061 | -.00137 | 163.84797 | 1.04631 |
| 10.330 | 12.031 | -.07625 | 150.95938 | .14262 | .04509 | .01451 | -.00054 | -.00094 | -.00198 | 163.78433 | 1.76072 |
| 10.330 | 15.099 | -.07562 | 151.04590 | .23271 | .04441 | .01809 | -.00057 | -.00089 | -.00245 | 163.84797 | 2.05911 |
| 10.330 | 20.188 | -.07294 | 150.95221 | .40660 | .04481 | .02074 | -.00038 | -.00096 | -.00389 | 163.76429 | 2.01043 |
| 10.330 | 23.495 | -.06912 | 151.00120 | .62603 | .04554 | .01783 | -.00058 | -.00127 | -.00515 | 163.51322 | 1.75635 |
| 10.330 | 30.748 | -.06612 | 150.91012 | .86349 | .04340 | .00702 | -.00092 | -.00132 | -.00674 | 163.68060 | 1.50379 |
| GRADIENT | | .00005 | -.01592 | .01280 | -.00217 | .00213 | -.00005 | .00000 | .00002 | -.02226 | .11143 |

OA82 CFHT113 MODEL 32-O CR8 W/N49N52 (AIR)

(RHL004) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q(PSF) = 150.000
 PCRC5 = 155.000 TCRC5 = 60.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 9/ D RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | BETA | ALPHA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -5.188 | -.23594 | 150.58805 | -.07444 | .06872 | -.02202 | -.00526 | .00934 | .03888 | 154.62330 | -1.07432 |
| 10.330 | -2.991 | -.23073 | 150.41145 | -.07497 | .06838 | -.02173 | -.00420 | .00588 | .01953 | 154.66109 | -1.08755 |
| 10.330 | .043 | -.23930 | 150.45267 | -.07864 | .06707 | -.02583 | -.00701 | .00724 | -.01689 | 154.92166 | -1.13311 |
| 10.330 | 2.962 | -.23495 | 150.49632 | -.07533 | .06758 | -.02596 | -.00783 | .00593 | -.04192 | 154.82849 | -1.10549 |
| 10.330 | 4.825 | -.22881 | 150.48184 | -.07695 | .06837 | -.02249 | -.00400 | -.00159 | -.04936 | 154.74479 | -1.11646 |
| GRADIENT | | .00027 | .01018 | -.00017 | .00000 | -.00015 | -.00007 | -.00081 | -.00894 | .00830 | -.00236 |

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QA02 CFHT113 MODEL 32-O CRB W/N49N52 (AIR)

(RHLO05) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = 155.000 TCRC5 = 68.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 10/ 0 RN/L = .96 GRADIENT INTERVAL = -9.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|---------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.499 | -.09950 | 150.57168 | -.20398 | .09751 | -.03733 | -.00175 | -.00128 | .00353 | 154.82849 | -1.42558 |
| 10.330 | -8.449 | -.11386 | 150.57349 | -.18231 | .08621 | -.02989 | -.00309 | .00156 | .00078 | 154.82849 | -1.45917 |
| 10.330 | -3.156 | -.11704 | 150.60280 | -.11122 | .07884 | -.02606 | -.00397 | .00280 | -.00350 | 154.82849 | -1.29260 |
| 10.330 | -.168 | -.13697 | 150.77409 | -.07767 | .06735 | -.02485 | -.00707 | .00745 | -.01583 | 154.71643 | -1.14636 |
| 10.330 | 2.823 | -.14513 | 150.59215 | -.04003 | .06361 | -.01637 | -.00828 | .00804 | -.01686 | 154.57739 | -.70038 |
| 10.330 | 5.860 | -.14543 | 150.68195 | .00950 | .05924 | -.00815 | -.00801 | .00645 | -.01281 | 154.80011 | .05650 |
| 10.330 | 9.063 | -.13528 | 150.62424 | .07589 | .05497 | -.00347 | -.00678 | .00333 | -.00528 | 154.83795 | 1.00064 |
| 10.330 | 12.088 | -.12812 | 150.79221 | .15023 | .05228 | -.00029 | -.00552 | .00124 | -.00123 | 154.80011 | 1.64823 |
| 10.330 | 15.146 | -.12639 | 150.84386 | .24772 | .05318 | .00139 | -.00576 | -.00005 | .00176 | 154.95801 | 1.94065 |
| 10.330 | 20.216 | -.13008 | 150.75499 | .42806 | .05427 | .00345 | -.00624 | .00007 | -.00026 | 154.80011 | 1.92576 |
| 10.330 | 25.343 | -.13690 | 150.87101 | .64004 | .05528 | .00071 | -.00705 | .00040 | -.00251 | 154.79066 | 1.71267 |
| 10.330 | 30.472 | -.13178 | 150.80762 | .87744 | .05493 | -.01012 | -.00661 | -.00091 | -.00179 | 154.80957 | 1.47954 |
| 10.330 | 35.634 | -.13471 | 150.70924 | 1.13027 | .05395 | -.02848 | -.00718 | -.00143 | -.00292 | 154.74479 | 1.26321 |
| GRADIENT | -.00470 | -.00179 | .01191 | -.00218 | .00162 | -.00072 | .00091 | -.00223 | -.04200 | .09906 | |

QA02 CFHT113 MODEL 32-O CRB W/N81N52 (AIR)

(RHLO06) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q(PSF) = 150.000
 PCRC5 = 157.000 TCRC5 = 68.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 11/ 0 RN/L = .96 GRADIENT INTERVAL = -3.00/ 5.00

| MACH | BETA | ALPHA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -5.112 | -.22117 | 150.83598 | -.07276 | .07109 | -.03155 | .00367 | -.00127 | .05082 | 156.96630 | -1.01570 |
| 10.330 | -2.934 | -.23116 | 150.66322 | -.07701 | .07014 | -.03402 | .00304 | -.00178 | .02886 | 156.75358 | -1.08910 |
| 10.330 | .028 | -.23404 | 150.60163 | -.08419 | .07088 | -.03281 | .00061 | -.00119 | .00035 | 156.92098 | -1.17807 |
| 10.330 | 3.027 | -.23507 | 150.66267 | -.07644 | .06953 | -.03345 | -.00159 | -.00119 | -.02781 | 156.92098 | -1.09039 |
| 10.330 | 4.889 | -.22276 | 150.83250 | -.07155 | .07098 | -.03028 | .00202 | -.00811 | -.03723 | 156.96630 | -1.00031 |
| GRADIENT | .00077 | .01949 | .00084 | .00003 | .00037 | -.00025 | -.00064 | -.00864 | .02445 | .01213 | |

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TABULATED SOURCE DATA - QA82

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QA82 CFHT113 MODEL 32-O CRB W/N51N52 (AIR)

(RHL007) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRCs = 157.000 TCRCs = 88.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 12/ D RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|----------|---------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.566 | -.08766 | 150.65004 | -.19887 | .09807 | -.04867 | .00123 | -.00220 | .00191 | 156.92098 | -1.38588 |
| 10.330 | -8.359 | -.08932 | 150.72469 | -.15549 | .08981 | -.03708 | .00107 | -.00200 | .00150 | 157.00468 | -1.35792 |
| 10.330 | -3.349 | -.08922 | 150.89497 | -.11005 | .08152 | -.03253 | .00118 | -.00207 | .00129 | 156.93057 | -1.19690 |
| 10.330 | -.164 | -.09331 | 150.83384 | -.08459 | .07097 | -.03271 | .00086 | -.00120 | .00133 | 156.73442 | -1.18499 |
| 10.330 | 2.801 | -.09399 | 150.78360 | -.04807 | .06838 | -.02581 | .00023 | -.00065 | -.00169 | 156.82769 | -.77877 |
| 10.330 | 5.838 | -.09511 | 150.90737 | .00275 | .06441 | -.01985 | .00013 | -.00029 | -.00306 | 156.80852 | -.05933 |
| 10.330 | 8.818 | -.09370 | 150.79255 | .06425 | .06026 | -.01478 | .00000 | -.00056 | -.00234 | 156.75358 | .78178 |
| 10.330 | 12.035 | -.08904 | 150.78821 | .14836 | .05737 | -.01244 | .00006 | -.00116 | -.00107 | 156.83728 | 1.52945 |
| 10.330 | 15.019 | -.08984 | 150.85385 | .24367 | .05830 | -.01220 | -.00022 | -.00133 | -.00083 | 156.75358 | 1.84373 |
| 10.330 | 20.177 | -.08333 | 150.86860 | .43887 | .06111 | -.01191 | -.00024 | -.00151 | -.00299 | 156.81811 | 1.87247 |
| 10.330 | 25.326 | -.08495 | 150.78337 | .66840 | .06154 | -.01515 | -.00086 | -.00134 | -.00529 | 156.75358 | 1.67843 |
| 10.330 | 30.481 | -.08018 | 150.79642 | .89988 | .06189 | -.02662 | -.00097 | -.00168 | -.00645 | 156.83728 | 1.45961 |
| 10.330 | 35.584 | -.07808 | 150.80414 | 1.15078 | .06075 | -.04470 | -.00142 | -.00199 | -.00773 | 156.83728 | 1.25243 |
| GRADIENT | -.00078 | .01477 | .01005 | -.00215 | .00108 | -.00015 | .00023 | -.00048 | -.01728 | .06720 | |

QA82 CFHT113 MODEL 32-O CRB W/N52 (AIR)

(RHL008) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q(PSF) = 150.000
 PCRCs = 155.000 TCRCs = 68.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 13/ D RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | BETA | ALPHA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|----------|--------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|---------|
| 10.330 | -5.178 | -.24307 | 150.11417 | -.06064 | .07472 | -.03078 | -.00353 | .01214 | .03043 | 154.84742 | -.80494 |
| 10.330 | -2.971 | -.23363 | 150.28389 | -.06217 | .07479 | -.03004 | -.00224 | .00803 | .01176 | 154.81903 | -.82439 |
| 10.330 | .012 | -.24146 | 150.14858 | -.05779 | .07129 | -.03318 | -.00410 | .00776 | -.01997 | 155.07011 | -.80368 |
| 10.330 | 2.961 | -.23757 | 150.24585 | -.06212 | .07278 | -.03117 | -.00480 | .00624 | -.04814 | 154.97695 | -.84637 |
| 10.330 | 4.823 | -.23219 | 150.26617 | -.06217 | .07439 | -.03000 | -.00168 | -.00055 | -.05841 | 154.80957 | -.82889 |
| GRADIENT | .00022 | .00087 | -.00015 | -.00002 | .00005 | .00000 | -.00097 | -.00016 | -.00163 | -.00227 | |

QA82 CFHT113 MODEL 32-O ORB W/N52 (AIR)

(RHLO09) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(P5F) = 150.000
 PCRC5 = 155.000 TCRC5 = 70.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 14/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(P5F) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.330 | -9.399 | -.07756 | 150.28920 | -.19203 | .10218 | -.04618 | -.00020 | .00255 | -.00848 | 154.80957 | -1.30717 |
| 10.330 | -6.406 | -.06391 | 150.22513 | -.15044 | .09284 | -.03747 | -.00154 | .00434 | -.01170 | 154.89326 | -1.27600 |
| 10.330 | -3.368 | -.06812 | 150.15814 | -.10468 | .08394 | -.03322 | -.00224 | .00518 | -.01323 | 155.06064 | -1.10701 |
| 10.330 | -.314 | -.09940 | 150.13077 | -.08049 | .07183 | -.03336 | -.00400 | .00777 | -.01931 | 155.00536 | -.83286 |
| 10.330 | 2.767 | -.11400 | 150.30130 | -.02242 | .06736 | -.02625 | -.00600 | .01014 | -.02187 | 154.96748 | -.39783 |
| 10.330 | 5.862 | -.11869 | 150.21579 | .02423 | .08425 | -.01887 | -.00622 | .00994 | -.02132 | 154.90273 | .26427 |
| 10.330 | 9.103 | -.10156 | 150.13677 | .09395 | .08107 | -.01436 | -.00484 | .00850 | -.01579 | 154.91219 | 1.10559 |
| 10.330 | 11.977 | -.08771 | 150.22060 | .16927 | .05908 | -.01334 | -.00271 | .00320 | -.00952 | 154.91219 | 1.65012 |
| 10.330 | 15.101 | -.07483 | 150.15740 | .26794 | .05961 | -.01267 | -.00158 | .00155 | -.00776 | 155.01484 | 1.90935 |
| 10.330 | 20.115 | -.07938 | 150.31964 | .44227 | .06047 | -.01007 | -.00235 | .00209 | -.01070 | 154.81903 | 1.88864 |
| 10.330 | 25.324 | -.06534 | 150.26438 | .65707 | .06141 | -.01350 | -.00312 | .00284 | -.01391 | 154.73534 | 1.68666 |
| 10.330 | 30.448 | -.07755 | 150.20261 | .89101 | .06144 | -.02490 | -.00280 | .00167 | -.01347 | 154.82849 | 1.46091 |
| 10.330 | 35.726 | -.07349 | 150.38810 | 1.14750 | .06078 | -.04293 | -.00288 | .00093 | -.01427 | 154.95801 | 1.24564 |
| GRADIENT | | -.00421 | .02335 | .01337 | -.00269 | .00114 | -.00061 | .00081 | -.00140 | -.01513 | .11695 |

QA82 CFHT113 MODEL 32-O ORB W/N55 (AIR)

(RHLO10) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q(P5F) = 150.000
 PCRC5 = 155.000 TCRC5 = 70.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 15/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | BETA | ALPHA | Q(P5F) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|---------|
| 10.330 | -5.124 | -.23551 | 150.20798 | -.06139 | .07587 | -.02628 | -.00153 | .00132 | .05885 | 157.98975 | -.80244 |
| 10.330 | -2.958 | -.23418 | 150.14590 | -.06016 | .07557 | -.02703 | -.00161 | -.00056 | .03690 | 158.00907 | -.78939 |
| 10.330 | .068 | -.24885 | 150.18198 | -.06347 | .07412 | -.03244 | .00030 | -.00391 | .00793 | 158.15713 | -.84884 |
| 10.330 | 3.004 | -.25113 | 150.16055 | -.06578 | .07271 | -.03261 | -.00020 | -.00547 | -.01450 | 158.07344 | -.89680 |
| 10.330 | 4.836 | -.24905 | 150.19430 | -.06809 | .07358 | -.03141 | -.00052 | -.00645 | -.03188 | 158.00907 | -.89059 |
| GRADIENT | | -.00189 | .00450 | -.00078 | -.00030 | -.00035 | .00012 | -.00074 | -.00869 | -.00170 | -.01382 |

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TABULATED SOURCE DATA - QAS2

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QAS2 CFHT113 MODEL 32-O ORB W/N85 (AIR)

(RHLO11) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = 156.000 TCRC5 = 70.000
 T/QA = 47.300 RN/L = 1.000

RUN NO. 16/ D RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.388 | -.10295 | 150.27270 | -.16330 | .10428 | -.04575 | .00034 | -.00236 | .00430 | 157.98009 | -1.24579 |
| 10.330 | -8.418 | -.11130 | 150.12796 | -.15268 | .09162 | -.03689 | -.00119 | -.00177 | .01458 | 156.09277 | -1.30873 |
| 10.330 | -3.504 | -.10826 | 150.21627 | -.10768 | .08163 | -.03722 | -.00015 | -.00283 | .01194 | 156.08310 | -1.16365 |
| 10.330 | -.500 | -.09919 | 150.08929 | -.06379 | .07472 | -.03265 | .00028 | -.00374 | .00891 | 156.10243 | -.64469 |
| 10.330 | 2.845 | -.10052 | 150.17571 | -.01676 | .08962 | -.02309 | -.00069 | -.00391 | .00974 | 159.18086 | -.29390 |
| 10.330 | 6.008 | -.09839 | 150.15806 | .03536 | .06523 | -.01669 | .00001 | -.00344 | .00754 | 158.84606 | .41326 |
| 10.330 | 9.012 | -.10620 | 150.29233 | .08960 | .06122 | -.01025 | -.00212 | -.00311 | .00924 | 158.75266 | 1.05921 |
| 10.330 | 12.027 | -.10737 | 150.22072 | .16536 | .05908 | -.00944 | -.00188 | -.00288 | .00850 | 158.31483 | 1.61982 |
| 10.330 | 15.132 | -.11427 | 150.37564 | .25476 | .05857 | -.00529 | -.00314 | -.00212 | .00690 | 157.89641 | 1.87438 |
| 10.330 | 20.082 | -.12014 | 150.32333 | .42485 | .05930 | -.00211 | -.00433 | -.00184 | .00451 | 157.89641 | 1.87648 |
| 10.330 | 25.349 | -.12260 | 150.26021 | .63954 | .06074 | -.00644 | -.00483 | -.00188 | .00267 | 157.98975 | 1.67921 |
| 10.330 | 30.430 | -.12681 | 150.15968 | .86575 | .06126 | -.01733 | -.00545 | -.00184 | .00101 | 156.00907 | 1.45622 |
| 10.330 | 35.696 | -.13079 | 150.23713 | 1.11711 | .06082 | -.03435 | -.00646 | -.00218 | -.00124 | 157.98975 | 1.24318 |
| GRADIENT | .00091 | -.00681 | .01432 | -.00189 | .00222 | -.00008 | -.00017 | -.00035 | .17238 | .13688 | |

QAS2 CFHT113 MODEL 32-O ORB W/N84 (AIR)

(RHLO12) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q (PSF) = 150.000
 PCRC5 = 161.000 TCRC5 = 70.000
 T/QA = 47.300 RN/L = 1.000

RUN NO. 17/ D RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | BETA | ALPHA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -5.150 | -.22725 | 150.07809 | -.07287 | .06943 | -.02987 | -.00350 | .01450 | .01229 | 160.67762 | -1.04124 |
| 10.330 | -2.980 | -.23798 | 150.26875 | -.08033 | .06923 | -.03051 | -.00488 | .01388 | -.00861 | 160.66760 | -1.15056 |
| 10.330 | .006 | -.23275 | 150.28723 | -.08134 | .06957 | -.03139 | -.00617 | .01357 | -.02928 | 160.74165 | -1.15956 |
| 10.330 | 2.899 | -.21618 | 150.07976 | -.07241 | .07013 | -.02673 | -.00658 | .01384 | -.06184 | 160.77115 | -1.02474 |
| 10.330 | 4.790 | -.21180 | 150.12339 | -.07221 | .06956 | -.02462 | -.00405 | .00933 | -.07627 | 160.79082 | -1.03046 |
| GRADIENT | .00363 | -.02514 | .00127 | .00007 | .00083 | .00003 | -.00047 | -.00923 | .01544 | .01906 | |

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QAB2 CPMT113 MODEL 32-O CRB W/N84

(AIR)

(RHL013) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 150.000
 PCRC5 = 161.000 TCRC5 = 70.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 10/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.381 | -.11877 | 150.34113 | -.19987 | .09717 | -.04136 | -.00017 | .00636 | -.02749 | 160.83517 | -1.41191 |
| 10.330 | -8.426 | -.13228 | 150.18742 | -.16001 | .08482 | -.03886 | -.00387 | .01077 | -.03736 | 160.95824 | -1.46290 |
| 10.330 | -5.549 | -.13468 | 150.23798 | -.11982 | .07608 | -.03809 | -.00558 | .01362 | -.03202 | 160.86469 | -1.37822 |
| 10.330 | -.362 | -.15896 | 150.24245 | -.08375 | .06992 | -.03209 | -.00617 | .01372 | -.02922 | 160.86469 | -1.18252 |
| 10.330 | 2.793 | -.15239 | 150.35936 | -.04368 | .06551 | -.02445 | -.00347 | .01129 | -.02323 | 160.83517 | -.74282 |
| 10.330 | 5.999 | -.14001 | 150.31417 | .01177 | .06088 | -.01717 | -.00391 | .00796 | -.01698 | 161.02225 | .08644 |
| 10.330 | 8.934 | -.12552 | 150.38014 | .06990 | .05656 | -.00998 | -.00096 | .00574 | -.01607 | 160.83517 | .90311 |
| 10.330 | 11.823 | -.10874 | 150.27022 | .14435 | .05497 | -.00846 | .00066 | .00328 | -.01352 | 160.93855 | 1.55945 |
| 10.330 | 15.130 | -.09736 | 150.28855 | .24015 | .05536 | -.00570 | .00229 | .00239 | -.01398 | 160.86469 | 1.87200 |
| 10.330 | 20.230 | -.08260 | 150.27506 | .41903 | .05691 | -.00337 | .00314 | .00166 | -.01542 | 160.86469 | 1.88355 |
| 10.330 | 25.241 | -.07596 | 150.26513 | .61941 | .05791 | -.00628 | .00283 | .00163 | -.01683 | 160.94839 | 1.69209 |
| 10.330 | 30.436 | -.06674 | 150.35036 | .85497 | .05862 | -.01642 | .00290 | .00167 | -.01859 | 161.02225 | 1.46199 |
| 10.330 | 35.633 | -.05833 | 150.31480 | 1.09749 | .05818 | -.03328 | .00278 | .00164 | -.02042 | 160.94839 | 1.24965 |
| | GRADIENT | .00036 | .01911 | .01197 | -.00167 | .00215 | .00002 | -.00040 | .00139 | -.00465 | .10012 |

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TABULATED SOURCE DATA - QAB2

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QAB2 CFHT113 MODEL 32-0 CRB W/N79 (AIR)

(RHLO14) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC3 = 155.000 TCRC3 = 76.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 21/ 0 RN/L = 1.02 GRADIENT INTERVAL = -3.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CSL | CYN | CY | PCRC3 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.410 | -.02080 | 151.30752 | -.18341 | .10045 | -.04290 | .00008 | -.00285 | .00328 | 154.95801 | -1.27448 |
| 10.330 | -8.224 | -.02014 | 151.30194 | -.14183 | .08947 | -.03326 | -.00030 | -.00286 | .00515 | 155.12537 | -1.25853 |
| 10.330 | -3.264 | -.02254 | 151.39403 | -.09879 | .08022 | -.03008 | -.00032 | -.00234 | .00453 | 155.11589 | -1.09735 |
| 10.330 | -.301 | -.02336 | 151.25651 | -.05591 | .07279 | -.02758 | -.00036 | -.00192 | .00255 | 155.28324 | -.75980 |
| 10.330 | 3.073 | -.02895 | 151.21080 | -.01163 | .06738 | -.01952 | -.00151 | -.00171 | .00279 | 155.39539 | -.22836 |
| 10.330 | 6.013 | -.02709 | 151.29189 | .03546 | .06283 | -.01361 | -.00170 | -.00171 | .00303 | 155.04189 | .43338 |
| 10.330 | 8.950 | -.03008 | 151.20607 | .09075 | .05958 | -.00748 | -.00234 | -.00172 | .00336 | 155.05116 | 1.10149 |
| 10.330 | 11.920 | -.03425 | 151.17799 | .16236 | .05741 | -.00426 | -.00298 | -.00140 | .00272 | 155.38590 | 1.63869 |
| 10.330 | 15.130 | -.03869 | 151.33124 | .25240 | .05600 | -.00193 | -.00348 | -.00155 | .00289 | 155.20905 | 1.90952 |
| 10.330 | 20.144 | -.03859 | 151.38001 | .42073 | .05637 | -.00083 | -.00352 | -.00168 | .00177 | 154.95801 | 1.89870 |
| 10.330 | 25.334 | -.04169 | 151.36928 | .62803 | .05720 | -.00434 | -.00381 | -.00187 | .00053 | 154.93908 | 1.69504 |
| 10.330 | 30.470 | -.04561 | 151.34612 | .84765 | .05720 | -.01413 | -.00430 | -.00197 | -.00074 | 154.93908 | 1.46428 |
| 10.330 | 35.721 | -.05093 | 151.17885 | 1.09489 | .05628 | -.03091 | -.00491 | -.00234 | -.00197 | 155.29273 | 1.24984 |
| | GRADIENT | -.00070 | -.02856 | .01374 | -.00202 | .00168 | -.00016 | .00010 | -.00027 | .04386 | .13760 |

QAB2 CFMT113 MODEL 32-O CRB W/N51

(AIR)

(RHLO13) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = 176.000 TCRC5 = 70.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 22/ 0 RN/L = 1.01 GRADIENT INTERVAL = -3.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.464 | -.01012 | 150.51213 | -.18247 | .10233 | -.04660 | .00036 | -.00193 | .00178 | 175.65888 | -1.24579 |
| 10.330 | -8.299 | -.02076 | 150.73103 | -.14723 | .08990 | -.03622 | -.00103 | -.00229 | .01256 | 175.53216 | -1.29346 |
| 10.330 | -5.324 | -.01960 | 150.53435 | -.10072 | .08068 | -.03540 | -.00028 | -.00253 | .00935 | 175.64811 | -1.10981 |
| 10.330 | -.187 | -.01329 | 150.63543 | -.05459 | .07377 | -.03185 | -.00001 | -.00280 | .00567 | 175.80472 | -.73491 |
| 10.330 | 2.868 | -.01128 | 150.77788 | -.01524 | .06785 | -.02199 | -.00089 | -.00402 | .00858 | 175.69951 | -.27776 |
| 10.330 | 9.812 | -.00995 | 150.80073 | .03058 | .06394 | -.01610 | -.00032 | -.00386 | .00727 | 175.71027 | .35902 |
| 10.330 | 8.937 | -.01673 | 150.83465 | .08872 | .06057 | -.01005 | -.00235 | -.00333 | .00793 | 175.73180 | 1.06273 |
| 10.330 | 12.090 | -.01931 | 150.62498 | .16581 | .05763 | -.00884 | -.00210 | -.00329 | .00798 | 175.72104 | 1.64752 |
| 10.330 | 15.102 | -.02631 | 150.62323 | .25353 | .05755 | -.00587 | -.00289 | -.00258 | .00643 | 175.74257 | 1.88940 |
| 10.330 | 20.232 | -.03523 | 150.85832 | .42523 | .03840 | -.00180 | -.00437 | -.00243 | .00507 | 175.69951 | 1.87668 |
| 10.330 | 25.363 | -.04409 | 150.75025 | .62918 | .03946 | -.00555 | -.00522 | -.00238 | .00447 | 175.65888 | 1.68007 |
| 10.330 | 30.578 | -.04925 | 150.64388 | .86219 | .06002 | -.01724 | -.00561 | -.00256 | .00314 | 175.64811 | 1.45181 |
| 10.330 | 35.558 | -.05749 | 150.85960 | 1.09666 | .05970 | -.03279 | -.00635 | -.00289 | .00161 | 175.53216 | 1.24938 |
| | GRADIENT | .00134 | .03930 | .01381 | -.00207 | .00216 | -.00010 | -.00024 | -.00016 | .00849 | .13431 |

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TABULATED SOURCE DATA - QAS2

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QAS2 CFHT113 MODEL 32-O CRB W/N83 (AIR)

(RHLO16) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 150.000
 PCRC5 = 158.000 TCRC5 = 70.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 23/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.417 | -.00202 | 148.78180 | -.20021 | .09695 | -.03350 | -.00189 | -.00528 | .01431 | 158.32451 | -1.41462 |
| 10.330 | -8.277 | -.00845 | 148.84265 | -.15512 | .08420 | -.02659 | -.00227 | -.00407 | .01355 | 157.98975 | -1.44041 |
| 10.330 | -3.326 | -.00939 | 149.03910 | -.11268 | .07577 | -.02300 | -.00219 | -.00416 | .01215 | 157.96078 | -1.31528 |
| 10.330 | -.273 | -.01162 | 148.94261 | -.07331 | .06772 | -.01741 | -.00282 | -.00358 | .00928 | 157.98975 | -1.07226 |
| 10.330 | 2.825 | -.01360 | 148.93415 | -.02870 | .06222 | -.01114 | -.00324 | -.00343 | .00766 | 158.14746 | -.52252 |
| 10.330 | 5.971 | -.01596 | 149.00901 | .02348 | .05788 | -.00417 | -.00335 | -.00333 | .00768 | 157.82237 | .28866 |
| 10.330 | 8.924 | -.01944 | 149.11208 | .08100 | .05491 | .00062 | -.00367 | -.00336 | .00811 | 157.71940 | 1.07032 |
| 10.330 | 12.128 | -.02662 | 149.16374 | .15618 | .05129 | .00437 | -.00453 | -.00307 | .00770 | 157.46837 | 1.71074 |
| 10.330 | 15.076 | -.03211 | 149.06105 | .24283 | .05113 | .00669 | -.00534 | -.00294 | .00783 | 157.64536 | 1.96554 |
| 10.330 | 20.300 | -.03991 | 149.11802 | .42411 | .05180 | .00906 | -.00617 | -.00325 | .00752 | 157.72904 | 1.94044 |
| 10.330 | 25.375 | -.04712 | 149.18198 | .62882 | .05303 | .00574 | -.00679 | -.00369 | .00696 | 157.88676 | 1.71853 |
| 10.330 | 30.463 | -.05333 | 149.18567 | .85721 | .05294 | -.00499 | -.00721 | -.00397 | .00610 | 157.71940 | 1.48276 |
| 10.330 | 35.581 | -.06094 | 149.21497 | 1.09931 | .05192 | -.02147 | -.00771 | -.00449 | .00509 | 157.70012 | 1.26689 |
| GRADIENT | | -.00068 | -.01703 | .01365 | -.00220 | .00193 | -.00017 | .00012 | -.00073 | .03040 | .12900 |

QA82 CFHT113 MODEL 32-O ORB W/N82 (AIR)

(RHLO17) (03 SEP 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1078.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 938.8800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 190.000
 PCRS = 198.000 TCRC = 70.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 24/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRS | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.330 | -9.537 | -.04272 | 148.87030 | -.19391 | .10008 | -.04779 | -.00171 | .00345 | -.01404 | 157.91571 | -1.33395 |
| 10.330 | -8.388 | -.05615 | 148.85851 | -.15053 | .09056 | -.03837 | -.00433 | .00916 | -.02082 | 157.73868 | -1.30712 |
| 10.330 | -3.411 | -.08466 | 148.85018 | -.10684 | .08211 | -.03347 | -.00548 | .01063 | -.02349 | 157.62809 | -1.15213 |
| 10.330 | -.251 | -.08270 | 148.86083 | -.08279 | .06993 | -.03396 | -.00837 | .01466 | -.03209 | 157.63572 | -.89001 |
| 10.330 | 2.857 | -.09190 | 148.72895 | -.02447 | .06742 | -.02652 | -.00938 | .01938 | -.03223 | 157.73868 | -.42054 |
| 10.330 | 5.868 | -.08466 | 148.81567 | .02307 | .06415 | -.01972 | -.00779 | .01247 | -.02653 | 157.63572 | .24764 |
| 10.330 | 8.999 | -.08439 | 148.93060 | .08892 | .06098 | -.01453 | -.00542 | .00769 | -.01797 | 157.71940 | 1.07078 |
| 10.330 | 12.059 | -.04448 | 148.79420 | .17120 | .05828 | -.01378 | -.00289 | .00365 | -.01069 | 157.98009 | 1.67391 |
| 10.330 | 15.098 | -.04279 | 148.90240 | .26483 | .05877 | -.01286 | -.00260 | .00319 | -.01087 | 157.98975 | 1.91195 |
| 10.330 | 20.171 | -.04370 | 148.85055 | .44475 | .06045 | -.01090 | -.00303 | .00343 | -.01369 | 157.90808 | 1.88785 |
| 10.330 | 25.231 | -.05061 | 148.81778 | .65312 | .06158 | -.01352 | -.00377 | .00389 | -.01645 | 157.73868 | 1.68974 |
| 10.330 | 30.611 | -.04929 | 148.80441 | .90052 | .06110 | -.02535 | -.00370 | .00314 | -.01674 | 157.49724 | 1.45542 |
| | GRADIENT | -.00435 | -.01959 | .01314 | -.00235 | .00111 | -.00062 | .00076 | -.00140 | .01792 | .11662 |

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TABULATED SOURCE DATA - QAB2

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QAB2 CFHT113 MODEL 32-O CRB W/N76 (AIR)

(RHLO10) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = 159.000 TCRC5 = 70.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 25/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.330 | -9.388 | -.02758 | 148.60790 | -.19226 | .10556 | -.04652 | .00037 | .00114 | -.00824 | 159.92004 | -1.27274 |
| 10.330 | -8.384 | -.02972 | 148.63154 | -.14924 | .09608 | -.03754 | -.00016 | .00152 | -.00657 | 159.00374 | -1.22799 |
| 10.330 | -3.168 | -.03199 | 148.75217 | -.10252 | .08575 | -.03249 | -.00042 | .00191 | -.00719 | 159.23553 | -1.06946 |
| 10.330 | -.144 | -.03806 | 148.83924 | -.05758 | .07376 | -.03277 | -.00177 | .00360 | -.01177 | 159.14194 | -.77652 |
| 10.330 | 2.790 | -.04588 | 148.87375 | -.01855 | .07020 | -.02707 | -.00299 | .00509 | -.01268 | 159.04853 | -.28777 |
| 10.330 | 5.809 | -.04958 | 148.68578 | .03166 | .06702 | -.01981 | -.00354 | .00562 | -.01386 | 159.08743 | .35365 |
| 10.330 | 8.980 | -.04659 | 148.83334 | .09600 | .06422 | -.01408 | -.00332 | .00435 | -.01225 | 159.19166 | 1.08130 |
| 10.330 | 11.912 | -.03504 | 148.86831 | .17192 | .06141 | -.01235 | -.00198 | .00201 | -.00765 | 159.97458 | 1.62747 |
| 10.330 | 15.060 | -.02677 | 148.82592 | .27143 | .06174 | -.01130 | -.00115 | .00053 | -.00582 | 159.97458 | 1.89074 |
| 10.330 | 20.295 | -.03222 | 148.75083 | .45952 | .06301 | -.00967 | -.00205 | .00126 | -.00915 | 159.17113 | 1.87263 |
| 10.330 | 25.331 | -.03928 | 148.79098 | .66706 | .06379 | -.01356 | -.00289 | .00194 | -.01197 | 159.08743 | 1.67794 |
| 10.330 | 30.461 | -.03401 | 148.92505 | .89959 | .06178 | -.02497 | -.00263 | .00063 | -.01118 | 159.03826 | 1.46103 |
| | GRADIENT | -.00233 | .02045 | .01444 | -.00262 | .00090 | -.00043 | .00053 | -.00096 | -.03136 | .13107 |

QAB2 CFHT113 MODEL 32-O CRB W/N85 (AIR)

(RHLO19) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = 158.000 TCRC5 = 70.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 26/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.558 | -.01579 | 148.90019 | -.19205 | .10649 | -.04797 | .00058 | -.00238 | .00249 | 158.00907 | -1.25420 |
| 10.330 | -8.373 | -.02242 | 149.12158 | -.15581 | .09340 | -.03794 | -.00118 | -.00193 | .01334 | 158.05412 | -1.31208 |
| 10.330 | -3.392 | -.01777 | 149.12650 | -.10954 | .08313 | -.03841 | -.00015 | -.00302 | .01038 | 158.06378 | -1.16726 |
| 10.330 | -.248 | -.00918 | 149.17646 | -.06650 | .07631 | -.03345 | .00026 | -.00399 | .00775 | 157.87711 | -.86380 |
| 10.330 | 2.690 | -.01029 | 149.02585 | -.02143 | .07096 | -.02392 | -.00082 | -.00412 | .00871 | 158.07344 | -.35396 |
| 10.330 | 5.926 | -.01095 | 149.10068 | .03322 | .06647 | -.01718 | -.00002 | -.00364 | .00645 | 158.05412 | .37644 |
| 10.330 | 8.859 | -.01701 | 149.10842 | .08813 | .06265 | -.01061 | -.00216 | -.00338 | .00808 | 158.06378 | 1.02583 |
| 10.330 | 12.049 | -.01937 | 149.24404 | .16833 | .06005 | -.00908 | -.00197 | -.00316 | .00755 | 157.80308 | 1.62031 |
| 10.330 | 14.984 | -.02703 | 149.05114 | .25656 | .05941 | -.00508 | -.00318 | -.00243 | .00594 | 158.16680 | 1.87893 |
| | GRADIENT | .00125 | -.01617 | .01448 | -.00200 | .00237 | -.00011 | -.00018 | -.00031 | .00088 | .13329 |

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OA82 CFHT113 MODEL 32-0 ORB W/N85 (AIR)

(RHLO20) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LRFP = 474.8100 IN. YMRP = .0000 IN.
 BRFP = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = 158.000 TCRC5 = 73.000
 T/OA = 47.500 RN/L = 1.000

RUN NO. 28/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CSL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.472 | -.01386 | 149.18540 | -.19102 | .10642 | -.04766 | .00057 | -.00238 | .00240 | 157.93503 | -1.25291 |
| 10.330 | -6.199 | -.02246 | 149.19941 | -.15323 | .09306 | -.03810 | -.00117 | -.00178 | .01292 | 157.85132 | -1.30469 |
| 10.330 | -3.184 | -.01582 | 149.24944 | -.10665 | .08268 | -.03809 | -.00014 | -.00310 | .01005 | 157.82237 | -1.15192 |
| 10.330 | -.253 | -.00804 | 149.30675 | -.06647 | .07637 | -.03337 | .00024 | -.00396 | .00768 | 157.90606 | -.86259 |
| 10.330 | 2.756 | -.00850 | 149.26654 | -.02014 | .07121 | -.02381 | -.00083 | -.00407 | .00835 | 156.92098 | -.33558 |
| 10.330 | 5.927 | -.01024 | 149.39074 | .03148 | .06614 | -.01685 | -.00005 | -.00367 | .00645 | 156.65073 | .35461 |
| 10.330 | 8.866 | -.01696 | 149.37661 | .08797 | .06274 | -.01049 | -.00219 | -.00336 | .00781 | 156.92098 | 1.02248 |
| 10.330 | 12.114 | -.01805 | 149.34056 | .17281 | .06043 | -.00915 | -.00198 | -.00314 | .00719 | 157.66463 | 1.63899 |
| 10.330 | 15.124 | -.02661 | 149.34255 | .25951 | .05981 | -.00485 | -.00327 | -.00243 | .00571 | 157.76762 | 1.87598 |
| 10.330 | 20.079 | -.03483 | 149.38496 | .43699 | .06087 | -.00145 | -.00452 | -.00216 | .00368 | 157.92537 | 1.88007 |
| 10.330 | 25.444 | -.04259 | 149.55837 | .65740 | .06200 | -.00622 | -.00514 | -.00225 | .00227 | 157.72904 | 1.67543 |
| 10.330 | 30.555 | -.04983 | 149.38339 | .89577 | .06269 | -.01828 | -.00576 | -.00222 | .00084 | 158.09277 | 1.45183 |
| 10.330 | 35.579 | -.05889 | 149.57626 | 1.13901 | .06195 | -.03513 | -.00681 | -.00263 | -.00071 | 157.89641 | 1.24856 |
| | GRADIENT | .00123 | .00619 | .01457 | -.00193 | .00241 | -.00012 | -.00016 | -.00028 | -.15253 | .13760 |

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TABULATED SOURCE DATA - QAS2

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QAS2 CPMT113 MODEL 32-Q CRB W/N52 (AIR)

(RHLO21) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6600 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 150.000
 PCRCs = 155.000 TCRCs = 75.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 29/ 0 RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CSL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.330 | -9.493 | -.03244 | 149.19072 | -.19480 | .10422 | -.04702 | .00011 | .00187 | -.00770 | 154.99589 | -1.29659 |
| 10.330 | -8.287 | -.03695 | 149.07749 | -.14909 | .09497 | -.03837 | -.00118 | .00361 | -.01078 | 154.99589 | -1.24444 |
| 10.330 | -3.282 | -.03989 | 149.12682 | -.10387 | .08569 | -.03393 | -.00175 | .00423 | -.01193 | 154.99589 | -1.07983 |
| 10.330 | -.290 | -.05182 | 149.23240 | -.06011 | .07295 | -.03405 | -.00359 | .00686 | -.01783 | 155.05116 | -.81558 |
| 10.330 | 2.664 | -.06734 | 149.20146 | -.01791 | .06901 | -.02720 | -.00381 | .00959 | -.02138 | 155.08907 | -.31370 |
| 10.330 | 5.926 | -.07094 | 149.23047 | .02884 | .06571 | -.01897 | -.00613 | .00971 | -.02141 | 155.00536 | .32054 |
| 10.330 | 8.824 | -.06126 | 149.32594 | .08810 | .06286 | -.01454 | -.00504 | .00703 | -.01712 | 154.89326 | 1.02352 |
| 10.330 | 12.045 | -.04098 | 149.45486 | .17537 | .06110 | -.01272 | -.00270 | .00308 | -.00994 | 154.88380 | 1.64763 |
| 10.330 | 15.035 | -.03255 | 149.25504 | .26815 | .06127 | -.01208 | -.00161 | .00140 | -.00775 | 154.99589 | 1.88816 |
| 10.330 | 20.327 | -.04208 | 149.27325 | .46061 | .06269 | -.00960 | -.00281 | .00248 | -.01169 | 154.98842 | 1.87465 |
| 10.330 | 25.310 | -.04693 | 149.22040 | .66403 | .06122 | -.01266 | -.00350 | .00291 | -.01459 | 154.91219 | 1.69245 |
| | GRADIENT | -.00447 | .01195 | .01398 | -.00270 | .00110 | -.00066 | .00087 | -.00153 | .01513 | .12497 |

QA82 CFHT113 MODEL 32-Q ORB W/N49 (AIR)

(RMLQ22) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 190.000
 PCRC5 = 155.000 TCRC5 = 69.000
 T/QA = 47.500 RN/L = 1.000

RUN NO. 30/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -9.485 | -.00768 | 149.26422 | -.20055 | .10211 | -.03984 | -.00104 | -.00429 | .00938 | 154.89326 | -1.35394 |
| 10.330 | -8.317 | -.01484 | 149.21116 | -.15603 | .09015 | -.03119 | -.00146 | -.00329 | .00969 | 154.99589 | -1.35960 |
| 10.330 | -3.294 | -.01273 | 149.12888 | -.10790 | .08138 | -.02824 | -.00147 | -.00335 | .00791 | 154.99589 | -1.17842 |
| 10.330 | -.284 | -.01571 | 149.14372 | -.06642 | .07278 | -.02285 | -.00220 | -.00261 | .00570 | 155.00536 | -.90357 |
| 10.330 | 2.831 | -.01607 | 149.13253 | -.02244 | .06695 | -.01627 | -.00249 | -.00256 | .00511 | 154.92166 | -.39148 |
| 10.330 | 5.875 | -.02072 | 149.23495 | .02752 | .06265 | -.00935 | -.00279 | -.00255 | .00534 | 154.91219 | .32177 |
| 10.330 | 9.033 | -.02285 | 149.36110 | .08968 | .05927 | -.00246 | -.00347 | -.00257 | .00572 | 154.80957 | 1.09158 |
| 10.330 | 11.989 | -.02799 | 149.30973 | .16361 | .05698 | .00113 | -.00418 | -.00230 | .00538 | 154.80011 | 1.65171 |
| 10.330 | 15.131 | -.03318 | 149.20684 | .25654 | .05546 | .00346 | -.00467 | -.00237 | .00566 | 154.84742 | 1.93505 |
| 10.330 | 20.118 | -.03706 | 149.28469 | .43580 | .05666 | .00447 | -.00507 | -.00255 | .00453 | 154.73534 | 1.91895 |
| 10.330 | 25.418 | -.04242 | 149.30380 | .65560 | .05774 | .00056 | -.00550 | -.00304 | .00401 | 154.81903 | 1.70092 |
| 10.330 | 30.597 | -.04928 | 149.23347 | .89620 | .05767 | -.01111 | -.00603 | -.00329 | .00306 | 154.83795 | 1.46710 |
| 10.330 | 35.690 | -.05671 | 149.41499 | 1.14609 | .05621 | -.02910 | -.00681 | -.00375 | .00219 | 154.66380 | 1.25727 |
| | GRADIENT | -.00054 | .00057 | .01391 | -.00234 | .00195 | -.00017 | .00013 | -.00045 | -.01218 | .12831 |

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TABULATED SOURCE DATA - OA02

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OA02 CFHT113 MODEL 32-O CRB W/N49

(AIR)

(RHLO23) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1078.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC8 = 129.000 TCRC8 = 72.000
 T/QA = 47.500 RN/L = .850

RUN NO. 32/ 0 RN/L = .79 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC8 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.368 | -.01218 | 124.12023 | -.20374 | .10241 | -.03743 | -.00131 | -.00383 | .01218 | 128.72994 | -1.37371 |
| 10.320 | -8.167 | -.01823 | 124.15891 | -.15631 | .08983 | -.03075 | -.00151 | -.00299 | .01118 | 128.88168 | -1.37373 |
| 10.320 | -3.271 | -.01409 | 124.25263 | -.11071 | .08111 | -.02739 | -.00160 | -.00327 | .00894 | 128.69863 | -1.21308 |
| 10.320 | -.343 | -.01633 | 124.10124 | -.07096 | .07293 | -.02185 | -.00210 | -.00256 | .00662 | 128.89736 | -.96128 |
| 10.320 | 2.801 | -.01743 | 124.25999 | -.02520 | .06785 | -.01577 | -.00237 | -.00251 | .00570 | 128.61494 | -.42807 |
| 10.320 | 6.040 | -.01864 | 124.12821 | .02992 | .06340 | -.00903 | -.00271 | -.00249 | .00563 | 128.88952 | .34884 |
| 10.320 | 9.036 | -.02140 | 124.18729 | .08811 | .05951 | -.00257 | -.00351 | -.00256 | .00628 | 128.81365 | 1.06890 |
| 10.320 | 12.097 | -.02567 | 124.31221 | .16118 | .05610 | .00185 | -.00390 | -.00219 | .00527 | 128.78232 | 1.64557 |
| 10.320 | 15.188 | -.02902 | 124.17603 | .25623 | .05639 | .00279 | -.00460 | -.00243 | .00620 | 128.79798 | 1.91290 |
| 10.320 | 20.229 | -.03398 | 124.23621 | .43446 | .05742 | .00440 | -.00494 | -.00260 | .00570 | 128.72211 | 1.90009 |
| 10.320 | 25.317 | -.03476 | 124.18623 | .64330 | .05830 | .00068 | -.00529 | -.00293 | .00426 | 128.89736 | 1.69806 |
| 10.320 | 30.341 | -.04069 | 124.16121 | .87400 | .05847 | -.00953 | -.00583 | -.00319 | .00316 | 128.88952 | 1.47321 |
| 10.320 | 35.413 | -.04658 | 124.29706 | 1.11768 | .05747 | -.02586 | -.00647 | -.00361 | .00185 | 128.78232 | 1.26354 |
| GRADIENT | | -.00055 | .00183 | .01409 | -.00218 | .00191 | -.00013 | .00012 | -.00053 | -.01473 | .12979 |

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QAB2 CFMT113 MODEL 32-O CRB W/N85

(AIR)

(RHLO24) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6600 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC3 = 131.000 TCRC3 = 72.000
 T/QA = 47.500 RM/L = .850

RUN NO. 33/ 0 RM/L = .78 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC3 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.230 | -.01698 | 124.13525 | -.19074 | .10694 | -.04556 | .00045 | -.00246 | .00391 | 130.95823 | -1.25682 |
| 10.320 | -6.199 | -.02516 | 124.09484 | -.15479 | .09375 | -.03866 | -.00118 | -.00141 | .01406 | 130.97417 | -1.30792 |
| 10.320 | -3.310 | -.01720 | 124.13206 | -.10911 | .08438 | -.03825 | -.00015 | -.00319 | .01130 | 130.96620 | -1.14936 |
| 10.320 | -.291 | -.01194 | 124.02335 | -.08889 | .07723 | -.03153 | -.00001 | -.00403 | .00922 | 131.05787 | -.88285 |
| 10.320 | 2.858 | -.01137 | 124.03532 | -.01713 | .07222 | -.02372 | -.00053 | -.00399 | .00829 | 131.06584 | -.29055 |
| 10.320 | 5.878 | -.01175 | 124.01064 | .03373 | .06829 | -.01731 | .00000 | -.00350 | .00637 | 131.05787 | .37207 |
| 10.320 | 8.837 | -.01760 | 124.00622 | .08912 | .06457 | -.01035 | -.00225 | -.00332 | .00807 | 131.06584 | .99753 |
| 10.320 | 12.035 | -.01848 | 124.01297 | .16911 | .06223 | -.00898 | -.00203 | -.00311 | .00769 | 130.99011 | 1.38555 |
| 10.320 | 14.956 | -.02609 | 124.07821 | .23401 | .06101 | -.00536 | -.00327 | -.00237 | .00606 | 130.89843 | 1.84456 |
| 10.320 | 20.193 | -.03222 | 124.01291 | .44121 | .06285 | -.00179 | -.00447 | -.00209 | .00401 | 130.98214 | 1.85721 |
| 10.320 | 25.316 | -.03782 | 124.01016 | .65271 | .06401 | -.00631 | -.00509 | -.00208 | .00247 | 130.99011 | 1.66980 |
| 10.320 | 30.482 | -.04372 | 124.15988 | .88992 | .06474 | -.01735 | -.00577 | -.00216 | .00108 | 130.79065 | 1.44728 |
| 10.320 | 35.460 | -.05059 | 124.16688 | 1.13137 | .06437 | -.03343 | -.00664 | -.00245 | -.00101 | 130.70716 | 1.24747 |
| | GRADIENT | .00094 | -.01554 | .01492 | -.00197 | .00236 | -.00006 | -.00013 | -.00049 | .01606 | .13959 |

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TABULATED SOURCE DATA - QAS2

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QAS2 CFHT113 MODEL 32-O ORB W/N52 (AIR)

(RMLO23) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 SREF = 936.6600 IN. ZMRP = 373.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 125.000
 PCRC5 = 129.000 TCRC5 = 72.000
 T/QA = 47.300 RN/L = .850

RUN NO. 34/ 0 RN/L = .02 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.320 | -9.468 | -.03284 | 124.40086 | -.19739 | .10303 | -.04673 | -.00003 | .00240 | -.00811 | 128.54698 | -1.30505 |
| 10.320 | -6.341 | -.03750 | 124.43913 | -.15255 | .09496 | -.03776 | -.00145 | .00430 | -.01157 | 128.62276 | -1.26892 |
| 10.320 | -3.340 | -.03944 | 124.46552 | -.10376 | .08395 | -.03429 | -.00220 | .00515 | -.01343 | 128.71428 | -1.09355 |
| 10.320 | -.341 | -.04844 | 124.42325 | -.06050 | .07341 | -.03390 | -.00388 | .00754 | -.01937 | 128.72994 | -.81424 |
| 10.320 | 2.790 | -.06123 | 124.43305 | -.01925 | .06998 | -.02664 | -.00601 | .01014 | -.02236 | 128.80392 | -.32620 |
| 10.320 | 5.830 | -.06361 | 124.42057 | .02637 | .06681 | -.01921 | -.00623 | .00991 | -.02174 | 128.89736 | .28117 |
| 10.320 | 8.969 | -.05302 | 124.56789 | .09414 | .06443 | -.01487 | -.00482 | .00674 | -.01666 | 128.86601 | 1.05905 |
| 10.320 | 11.892 | -.03940 | 124.49224 | .17213 | .06218 | -.01331 | -.00287 | .00346 | -.01042 | 128.81365 | 1.61577 |
| 10.320 | 15.073 | -.03035 | 124.47681 | .27138 | .06189 | -.01275 | -.00165 | .00155 | -.00794 | 128.81365 | 1.88701 |
| 10.320 | 20.070 | -.03425 | 124.48122 | .45021 | .06350 | -.01010 | -.00247 | .00212 | -.01094 | 128.88952 | 1.87297 |
| 10.320 | 25.242 | -.03976 | 124.58453 | .66318 | .06511 | -.01349 | -.00320 | .00276 | -.01377 | 128.87384 | 1.67423 |
| 10.320 | 30.320 | -.03519 | 124.63112 | .90039 | .06489 | -.02456 | -.00288 | .00169 | -.01338 | 128.79015 | 1.45615 |
| 10.320 | 35.482 | -.03392 | 124.49005 | 1.15509 | .06448 | -.04233 | -.00304 | .00101 | -.01401 | 128.88952 | 1.24923 |
| | GRADIENT | -.00356 | -.00524 | .01411 | -.00259 | .00126 | -.00062 | .00081 | -.00149 | .01500 | .12508 |

QAS2 CPMT113 MODEL 32-Q CRB W/N82 (AIR)

(RHLO26) (03 SEP 74)

REFERENCE DATA

SREP = 2880.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREP = 474.8100 IN. YMRP = .0000 IN.
 BREP = 936.8800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 100.000
 PCRCs = 103.000 TCRCs = 72.000
 T/QA = 47.500 RN/L = .720

RUN NO. 36/ 0 RN/L = .84 GRADIENT INTERVAL = -5.00/ 5.00

| HAOH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.310 | -9.282 | -.03047 | 99.70321 | -.19103 | .10372 | -.04353 | -.00022 | .00270 | -.00697 | 103.33464 | -1.29000 |
| 10.310 | -6.319 | -.03392 | 99.71349 | -.14866 | .09436 | -.03580 | -.00122 | .00417 | -.00976 | 103.25096 | -1.24719 |
| 10.310 | -3.121 | -.03729 | 99.65182 | -.10103 | .08322 | -.03286 | -.00234 | .00543 | -.01261 | 103.08962 | -1.08750 |
| 10.310 | -.120 | -.04363 | 99.73416 | -.05421 | .07267 | -.03137 | -.00406 | .00786 | -.01877 | 103.23096 | -.74271 |
| 10.310 | 2.848 | -.03329 | 99.74149 | -.01720 | .06992 | -.02560 | -.00593 | .01016 | -.02196 | 103.08962 | -.29942 |
| 10.310 | 5.893 | -.03414 | 99.82081 | .02849 | .06703 | -.01837 | -.00816 | .00983 | -.02133 | 103.07737 | .30833 |
| 10.310 | 9.027 | -.04498 | 99.70180 | .09480 | .06431 | -.01514 | -.00472 | .00690 | -.01580 | 103.01233 | 1.06376 |
| 10.310 | 11.994 | -.03674 | 99.82402 | .16897 | .06296 | -.01337 | -.00292 | .00380 | -.01003 | 103.16728 | 1.57397 |
| 10.310 | 14.941 | -.02943 | 99.71864 | .26084 | .06291 | -.01364 | -.00156 | .00177 | -.00718 | 103.10227 | 1.84177 |
| 10.310 | 20.200 | -.03209 | 99.83348 | .44106 | .06382 | -.01066 | -.00223 | .00214 | -.00984 | 103.08339 | 1.84688 |
| 10.310 | 25.309 | -.03454 | 99.70583 | .64931 | .06339 | -.01387 | -.00277 | .00266 | -.01276 | 103.01837 | 1.66036 |
| 10.310 | 30.244 | -.03267 | 99.70359 | .86692 | .06346 | -.02374 | -.00256 | .00190 | -.01288 | 103.08962 | 1.45164 |
| 10.310 | 35.350 | -.03062 | 99.68843 | 1.11398 | .06547 | -.03851 | -.00258 | .00121 | -.01413 | 103.09604 | 1.24763 |
| | GRADIENT | -.00268 | .01508 | .01405 | -.00223 | .00121 | -.00060 | .00079 | -.00137 | .00010 | .13200 |

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TABULATED SOURCE DATA - QA82

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QA82 CFHT113 MODEL 32-O CRB W/N85 (AIR)

(RHLO27) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 SREF = 938.6000 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 100,000
 PCRCs = 105,000 TCRCs = 72,000
 T/OA = 47.500 RN/L = .720

RUN NO. 37/ 0 RN/L = .67 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.310 | -9.475 | -.02168 | 100.10894 | -.20585 | .10615 | -.04282 | -.00121 | -.00219 | .01696 | 105.25301 | -1.33908 |
| 10.310 | -8.297 | -.02394 | 100.04986 | -.13562 | .09485 | -.03843 | -.00118 | -.00144 | .01563 | 105.18204 | -1.29578 |
| 10.310 | -3.284 | -.01747 | 99.98307 | -.11144 | .08484 | -.03753 | -.00020 | -.00324 | .01266 | 105.18204 | -1.17074 |
| 10.310 | -.311 | -.01227 | 100.02631 | -.06840 | .07813 | -.03063 | -.00014 | -.00413 | .01061 | 105.29118 | -.86594 |
| 10.310 | 2.832 | -.01322 | 100.03332 | -.01596 | .07333 | -.02350 | -.00028 | -.00391 | .00910 | 105.18840 | -.27034 |
| 10.310 | 5.864 | -.01439 | 100.05037 | .03505 | .06960 | -.01703 | .00017 | -.00347 | .00741 | 105.02101 | .38113 |
| 10.310 | 8.866 | -.01840 | 100.14706 | .08865 | .06583 | -.01042 | -.00214 | -.00321 | .00914 | 104.91829 | .98326 |
| 10.310 | 11.943 | -.01937 | 100.04734 | .16443 | .06385 | -.00868 | -.00198 | -.00305 | .00868 | 105.11106 | 1.33024 |
| 10.310 | 15.074 | -.02551 | 100.07021 | .25937 | .06332 | -.00550 | -.00331 | -.00218 | .00638 | 104.93732 | 1.81941 |
| 10.310 | 20.228 | -.02979 | 100.05426 | .43942 | .06406 | -.00225 | -.00432 | -.00193 | .00476 | 104.93732 | 1.84007 |
| 10.310 | 25.188 | -.03458 | 100.07178 | .64015 | .06569 | -.00555 | -.00492 | -.00190 | .00315 | 105.01466 | 1.66121 |
| 10.310 | 30.454 | -.03905 | 100.07019 | .87963 | .06694 | -.01675 | -.00551 | -.00196 | .00134 | 104.93097 | 1.43851 |
| 10.310 | 35.382 | -.04326 | 100.07105 | 1.11706 | .06626 | -.03195 | -.00636 | -.00226 | -.00040 | 104.84728 | 1.24567 |
| | GRADIENT | .00069 | .01140 | .01562 | -.00185 | .00229 | -.00001 | -.00011 | -.00061 | .00072 | .14767 |

OA82 CFHT113 MODEL 32-Q CRB W/N49

(AIR)

(RHLO28) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 100.000
 PCRC5 = 103.000 TCRC5 = 72.000
 T/QA = 47.500 RN/L = .720

RUN NO. 36/ D RN/L = .63 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.310 | -9.443 | -.01585 | 99.65499 | -.20378 | .10321 | -.03563 | -.00170 | -.00337 | .01366 | 102.82633 | -1.36099 |
| 10.310 | -8.843 | -.01651 | 99.57703 | -.15181 | .09168 | -.03014 | -.00163 | -.00297 | .01099 | 102.83875 | -1.30921 |
| 10.310 | -3.207 | -.01542 | 99.56371 | -.10606 | .08219 | -.02700 | -.00173 | -.00263 | .00911 | 103.01235 | -1.15115 |
| 10.310 | -.182 | -.01728 | 99.57589 | -.06554 | .07419 | -.02100 | -.00220 | -.00240 | .00646 | 102.93487 | -.87782 |
| 10.310 | 2.916 | -.01954 | 99.68547 | -.01993 | .06886 | -.01528 | -.00240 | -.00232 | .00574 | 102.92866 | -.34546 |
| 10.310 | 5.951 | -.02041 | 99.72870 | .03139 | .06305 | -.00905 | -.00279 | -.00229 | .00571 | 102.91001 | .36018 |
| 10.310 | 9.000 | -.02274 | 99.71194 | .08959 | .06167 | -.00280 | -.00359 | -.00230 | .00614 | 102.74265 | 1.05224 |
| 10.310 | 11.995 | -.02576 | 99.73502 | .15784 | .05794 | .00113 | -.00399 | -.00193 | .00535 | 102.91001 | 1.58958 |
| 10.310 | 15.081 | -.02799 | 99.63071 | .25680 | .05903 | .00140 | -.00453 | -.00212 | .00573 | 102.93487 | 1.87863 |
| 10.310 | 20.219 | -.03160 | 99.67961 | .43396 | .05957 | .00360 | -.00498 | -.00228 | .00477 | 102.83875 | 1.87798 |
| 10.310 | 25.232 | -.03512 | 99.66392 | .63535 | .06032 | .00054 | -.00544 | -.00258 | .00392 | 102.84496 | 1.68719 |
| 10.310 | 30.285 | -.03809 | 99.66468 | .86161 | .06125 | -.00895 | -.00583 | -.00294 | .00325 | 102.92866 | 1.46314 |
| 10.310 | 35.405 | -.04212 | 99.65382 | 1.10555 | .06012 | -.02380 | -.00842 | -.00329 | .00203 | 102.85117 | 1.25639 |
| | GRADIENT | -.00067 | .01993 | .01407 | -.00218 | .00191 | -.00011 | .00006 | -.00055 | -.01362 | .13175 |

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TABULATED SOURCE DATA - 0A82

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0A82 CFHT113 MODEL 32-O CRB W/N49 (AIR)

(RHLO29) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 75.000
 PCRCs = 78.000 TCRCs = 72.000
 T/QA = 47.500 RN/L = .500

RUN NO. 40/ 0 RN/L = .45 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|----------|---------|---------|---------|---------|---------|---------|----------|----------|
| 10.300 | -9.440 | -.01948 | 74.11828 | -.20306 | .10376 | -.03451 | -.00184 | -.00330 | .01415 | 77.89480 | -1.36234 |
| 10.300 | -8.226 | -.01859 | 74.08547 | -.15583 | .09215 | -.02892 | -.00180 | -.00304 | .01189 | 78.07615 | -1.31850 |
| 10.300 | -3.115 | -.01963 | 74.09109 | -.10280 | .08377 | -.02680 | -.00186 | -.00290 | .00948 | 77.98780 | -1.09937 |
| 10.300 | -.046 | -.02004 | 74.20125 | -.06234 | .07628 | -.01997 | -.00204 | -.00246 | .00703 | 78.06217 | -.81591 |
| 10.300 | 2.938 | -.02080 | 74.18849 | -.01769 | .07124 | -.01448 | -.00231 | -.00231 | .00585 | 77.97848 | -.30353 |
| 10.300 | 6.036 | -.02263 | 74.09683 | .03362 | .06626 | -.00874 | -.00257 | -.00216 | .00567 | 77.99245 | .38124 |
| 10.300 | 9.008 | -.02351 | 74.19714 | .09009 | .06399 | -.00298 | -.00351 | -.00233 | .00655 | 78.06217 | 1.02146 |
| 10.300 | 12.119 | -.02596 | 74.19308 | .13948 | .06002 | .00093 | -.00417 | -.00201 | .00585 | 77.97848 | 1.55508 |
| 10.300 | 15.016 | -.02741 | 74.11140 | .25099 | .06106 | .00117 | -.00460 | -.00219 | .00644 | 77.99711 | 1.82732 |
| 10.300 | 20.193 | -.02972 | 74.10098 | .43034 | .06274 | .00253 | -.00485 | -.00230 | .00526 | 77.99245 | 1.84580 |
| 10.300 | 25.114 | -.03309 | 74.08932 | .62113 | .06292 | .00080 | -.00548 | -.00251 | .00508 | 77.98780 | 1.67098 |
| 10.300 | 30.267 | -.03407 | 74.12019 | .85288 | .06332 | -.00757 | -.00576 | -.00283 | .00370 | 77.98314 | 1.45432 |
| 10.300 | 35.392 | -.03709 | 74.15723 | 1.09244 | .06371 | -.02151 | -.00630 | -.00321 | .00286 | 77.98314 | 1.24688 |
| | GRADIENT | -.00019 | .01619 | .01406 | -.00207 | .00204 | -.00011 | .00310 | -.00060 | -.00142 | .13129 |

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QAS2 CFHT113 MODEL 32-Q CRB W/N49

(AIR)

(RMLO30) (03 SEP 74)

REFERENCE DATA

BREF = 2890,0000 SQ.FT. XMRP = 1076,7000 IN.
 LREF = 474,8100 IN. YMRP = .0000 IN.
 BREF = 936,6800 IN. ZMRP = 375,0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 200,000
 PCRCs = 83,000 TCRCs = 72,000
 T/QA = 19,000 RN/L = 1,350

RUN NO. 44/ 0 RN/L = 1,29 GRADIENT INTERVAL = -5,00/ 5,00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|----------|----------|
| 10,340 | -9,510 | -.01600 | 200,42274 | -.18353 | .09943 | -.04410 | .00020 | -.00208 | .00048 | 83,01442 | -1,28190 |
| 10,340 | -8,507 | -.01290 | 200,32146 | -.14549 | .08994 | -.03553 | -.00010 | -.00266 | .00251 | 82,85198 | -1,26934 |
| 10,340 | -3,300 | -.01332 | 200,36170 | -.09850 | .08105 | -.03087 | -.00020 | -.00237 | .00186 | 82,93569 | -1,08179 |
| 10,340 | -.273 | -.01662 | 200,31097 | -.05744 | .07225 | -.02771 | -.00045 | -.00189 | .00139 | 82,85198 | -.78736 |
| 10,340 | 2,749 | -.01911 | 200,31181 | -.01667 | .06709 | -.02150 | -.00108 | -.00170 | .00162 | 82,77323 | -.30056 |
| 10,340 | 5,997 | -.02019 | 200,27983 | .03318 | .06137 | -.01344 | -.00171 | -.00173 | .00207 | 82,77323 | .41224 |
| 10,340 | 9,046 | -.02243 | 200,27824 | .09308 | .05838 | -.00746 | -.00210 | -.00189 | .00242 | 82,77323 | 1,14435 |
| 10,340 | 12,105 | -.02570 | 200,41631 | .16652 | .05656 | -.00454 | -.00244 | -.00199 | .00291 | 82,84206 | 1,67323 |
| 10,340 | 15,078 | -.02830 | 200,35947 | .25386 | .05574 | -.00316 | -.00261 | -.00188 | .00213 | 82,84702 | 1,92413 |
| 10,340 | 20,376 | -.03285 | 200,32706 | .43694 | .05571 | -.00256 | -.00283 | -.00185 | .00074 | 82,94065 | 1,90946 |
| 10,340 | 25,450 | -.03555 | 200,25613 | .63853 | .05610 | -.00631 | -.00313 | -.00211 | -.00075 | 82,93072 | 1,69966 |
| 10,340 | 30,503 | -.04429 | 200,40694 | .85986 | .05570 | -.01715 | -.00384 | -.00213 | -.00228 | 82,83710 | 1,47092 |
| 10,340 | 35,775 | -.05300 | 200,48213 | 1,10689 | .05495 | -.03385 | -.00476 | -.00238 | -.00412 | 82,75836 | 1,23191 |
| | GRADIENT | -.00096 | -.00828 | .01353 | -.00231 | .00155 | -.00015 | .00011 | -.00004 | -.02688 | .12922 |

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TABULATED SOURCE DATA - 0A82

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0A82 CFHT113 MODEL 32-0 CRB W/N49 (AIR)

(RMLO31) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 200.000
 PCRCs = 261.000 TCRCs = 75.000
 T/QA = 60.000 RM/L = 1.330

RUN NO. 45/ 0 RM/L = 1.29 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.340 | -9.531 | .00206 | 200.45311 | -.19358 | .09320 | -.03510 | -.00120 | -.00476 | .00808 | 260.47319 | -1.41552 |
| 10.340 | -8.278 | -.00379 | 200.46537 | -.15275 | .08209 | -.02572 | -.00210 | -.00428 | .01117 | 260.65567 | -1.45337 |
| 10.340 | -3.216 | -.00668 | 200.45212 | -.10839 | .07316 | -.02253 | -.00225 | -.00395 | .01018 | 261.15893 | -1.31572 |
| 10.340 | -.212 | -.01191 | 200.51664 | -.06966 | .06511 | -.01754 | -.00276 | -.00337 | .00821 | 261.14282 | -1.08186 |
| 10.340 | 2.852 | -.01497 | 200.54103 | -.02890 | .05936 | -.01218 | -.00309 | -.00299 | .00608 | 260.89171 | -.35003 |
| 10.340 | 5.928 | -.01898 | 200.67953 | .01971 | .05535 | -.00537 | -.00344 | -.00291 | .00613 | 260.75975 | .24331 |
| 10.340 | 8.955 | -.02374 | 200.67711 | .07923 | .05172 | -.00012 | -.00372 | -.00269 | .00609 | 260.70822 | 1.10716 |
| 10.340 | 12.069 | -.03165 | 200.70605 | .15446 | .04901 | .00230 | -.00439 | -.00245 | .00608 | 260.84344 | 1.75514 |
| 10.340 | 15.140 | -.03913 | 200.68325 | .24146 | .04838 | .00460 | -.00497 | -.00240 | .00647 | 260.59237 | 2.00834 |
| 10.340 | 20.468 | -.04962 | 200.73811 | .42478 | .04946 | .00715 | -.00385 | -.00272 | .00589 | 260.35736 | 1.95336 |
| 10.340 | 25.552 | -.06088 | 200.63733 | .62499 | .04983 | .00396 | -.00663 | -.00308 | .00533 | 260.12232 | 1.72435 |
| 10.340 | 30.785 | -.07061 | 200.55764 | .85827 | .04977 | -.00765 | -.00727 | -.00345 | .00463 | 260.48925 | 1.47676 |
| 10.340 | 35.841 | -.08178 | 200.61029 | 1.09529 | .04919 | -.02444 | -.00781 | -.00404 | .00347 | 260.74038 | 1.26109 |
| | GRADIENT | -.00136 | .01463 | .01310 | -.00227 | .00171 | -.00014 | .00016 | -.00068 | -.04415 | .12627 |

QA82 CFHT113 MODEL 32-O ORB W/N49

(AIR)

(RHLO32) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BRFP = 936.6000 IN. ZMRP = 379.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(P&F) = 200.000
 PCRCB = 478.000 TCRCB = 78.000
 T/QA = 110.000 RN/L = 1.350

RUN NO. 46/ 0 RN/L = 1.26 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(P&F) | CN | CA | CLM | CBL | CYN | CY | PCRCB | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.340 | -9.453 | .01001 | 200.38253 | -.21618 | .08587 | -.01886 | -.00323 | -.00392 | .02176 | 477.96746 | -1.65661 |
| 10.340 | -6.401 | -.00055 | 200.43896 | -.17245 | .07499 | -.01229 | -.00332 | -.00488 | .01957 | 477.88379 | -1.73882 |
| 10.340 | -3.364 | -.00233 | 200.49516 | -.12772 | .06498 | -.00959 | -.00395 | -.00480 | .01577 | 477.63262 | -1.70922 |
| 10.340 | -.271 | -.00491 | 200.60563 | -.08748 | .05768 | -.00768 | -.00514 | -.00476 | .01128 | 477.71108 | -1.50101 |
| 10.340 | 2.825 | -.00624 | 200.82463 | -.04261 | .05244 | -.00260 | -.00492 | -.00468 | .01013 | 477.59774 | -.89782 |
| 10.340 | 5.939 | -.01369 | 200.66655 | .00718 | .04809 | .00440 | -.00320 | -.00447 | .00988 | 477.85409 | .04451 |
| 10.340 | 8.965 | -.02189 | 200.65798 | .06950 | .04486 | .00786 | -.00323 | -.00398 | .00981 | 477.59774 | 1.11823 |
| 10.340 | 12.046 | -.03180 | 200.80634 | .14355 | .04153 | .01033 | -.00602 | -.00398 | .01048 | 477.82443 | 1.86654 |
| 10.340 | 15.067 | -.04122 | 200.87032 | .22868 | .04104 | .01219 | -.00670 | -.00378 | .01089 | 477.68143 | 2.12106 |
| 10.340 | 20.451 | -.05796 | 200.76128 | .41150 | .04219 | .01589 | -.00787 | -.00400 | .01070 | 477.85409 | 2.02285 |
| 10.340 | 25.566 | -.07405 | 200.73626 | .61016 | .04368 | .01407 | -.00909 | -.00457 | .01060 | 477.90813 | 1.75598 |
| 10.340 | 30.809 | -.09073 | 200.73432 | .84120 | .04385 | .00360 | -.01014 | -.00487 | .00918 | 477.99713 | 1.49415 |
| 10.340 | 35.888 | -.10441 | 200.73432 | 1.07808 | .04320 | -.01224 | -.01076 | -.00546 | .00771 | 477.99713 | 1.27155 |
| | GRADIENT | -.00063 | .05324 | .01375 | -.00203 | .00118 | .00017 | .00002 | -.00091 | -.00564 | .13111 |

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TABULATED SOURCE DATA - QAS2

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QAS2 CFHT113 MODEL 32-O CRB W/N49 (AIR)

(RMLOS3) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 GREF = 936.8800 IN. ZMRP = 373.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 200.000
 PCRCB = 895.000 TCRCB = 80.000
 T/QA = 160.000 RN/L = 1.330

RUN NO. 47/ 0 RN/L = 1.33 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CEL | CYN | CY | PCRCB | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.340 | -9.801 | .01008 | 200.89434 | -.23148 | .07684 | -.00403 | -.00810 | -.00568 | .02842 | 898.19813 | -1.91827 |
| 10.340 | -8.389 | .00083 | 200.94994 | -.19090 | .08586 | .00085 | -.00674 | -.00479 | .02333 | 895.31588 | -2.10308 |
| 10.340 | -3.334 | .00896 | 200.88268 | -.14310 | .05685 | .00079 | -.00674 | -.00629 | .01967 | 895.65636 | -2.14446 |
| 10.340 | -.213 | .00308 | 201.00923 | -.10351 | .05068 | .00345 | -.00790 | -.00601 | .01466 | 894.90017 | -2.02319 |
| 10.340 | 2.849 | -.00613 | 201.20418 | -.03872 | .04521 | .00920 | -.00786 | -.00576 | .01431 | 894.90017 | -1.44172 |
| 10.340 | 5.930 | -.01161 | 201.34037 | -.00699 | .04117 | .01518 | -.00724 | -.00569 | .01485 | 895.08480 | -.27846 |
| 10.340 | 9.179 | -.02197 | 201.18363 | .06213 | .03765 | .01808 | -.00729 | -.00542 | .01466 | 894.69227 | 1.17513 |
| 10.340 | 12.232 | -.03283 | 201.31797 | .14068 | .03553 | .01940 | -.00787 | -.00539 | .01471 | 895.10804 | 2.01222 |
| 10.340 | 15.293 | -.04408 | 201.33076 | .22697 | .03461 | .02144 | -.00840 | -.00520 | .01534 | 894.64905 | 2.24983 |
| 10.340 | 20.421 | -.06127 | 201.46991 | .39839 | .03534 | .02462 | -.00931 | -.00539 | .01566 | 895.23219 | 2.09754 |
| 10.340 | 25.834 | -.08162 | 201.52153 | .60281 | .03698 | .02290 | -.01069 | -.00596 | .01543 | 895.14849 | 1.79342 |
| 10.340 | 30.837 | -.10184 | 201.38971 | .82949 | .03736 | .01344 | -.01198 | -.00633 | .01472 | 895.07036 | 1.51566 |
| 10.340 | 35.985 | -.12403 | 201.48238 | 1.06981 | .03703 | -.00199 | -.01313 | -.00717 | .01335 | 895.52937 | 1.29144 |
| | GRADIENT | -.00244 | .05521 | .01364 | -.00188 | .00136 | .00017 | .00009 | -.00087 | -.12266 | .11344 |

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OA82 CFHT113 MODEL 32-O ORB W/N92 (AIR)

(RHLO34) (03 SEP 74)

REFERENCE DATA

GREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6000 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 200.000
 PCRC5 = 83.000 TCRC5 = 80.000
 T/OA = 19.000 RN/L = 1.350

RUN NO. 48/ 0 RN/L = 1.20 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|----------|----------|
| 10.340 | -9.368 | -.02725 | 200.83562 | -.18213 | .10134 | -.04655 | .00054 | .00018 | -.00314 | 82.75836 | -1.25893 |
| 10.340 | -6.373 | -.02331 | 200.85934 | -.14285 | .09185 | -.03762 | .00021 | .00008 | -.00447 | 82.76828 | -1.22988 |
| 10.340 | -3.349 | -.02356 | 200.67050 | -.10012 | .08312 | -.03277 | .00029 | -.00005 | -.00417 | 83.02438 | -1.07051 |
| 10.340 | -.372 | -.02973 | 200.89360 | -.05801 | .07173 | -.03143 | -.00042 | .00094 | -.00690 | 82.84206 | -.79806 |
| 10.340 | 2.832 | -.04223 | 200.80864 | -.01283 | .06865 | -.02719 | -.00168 | .00283 | -.00889 | 83.01939 | -.24430 |
| 10.340 | 5.885 | -.04670 | 200.91297 | .03573 | .06326 | -.01970 | -.00229 | .00361 | -.01031 | 83.00945 | .43626 |
| 10.340 | 8.851 | -.05329 | 200.86937 | .09351 | .06053 | -.01420 | -.00308 | .00404 | -.01167 | 83.09812 | 1.11968 |
| 10.340 | 12.089 | -.04189 | 200.69877 | .17553 | .05891 | -.01181 | -.00229 | .00232 | -.00945 | 83.10807 | 1.68817 |
| 10.340 | 15.220 | -.03955 | 200.88608 | .27028 | .05832 | -.01123 | -.00195 | .00151 | -.00835 | 82.76332 | 1.92959 |
| 10.340 | 20.321 | -.04134 | 200.92653 | .44771 | .05891 | -.00974 | -.00226 | .00160 | -.01045 | 82.66972 | 1.89333 |
| 10.340 | 25.525 | -.04315 | 200.70748 | .65978 | .05940 | -.01440 | -.00261 | .00163 | -.01236 | 82.94065 | 1.68622 |
| 10.340 | 30.779 | -.04415 | 200.73564 | .89636 | .05988 | -.02619 | -.00287 | .00103 | -.01314 | 83.01442 | 1.44955 |
| 10.340 | 35.791 | -.04030 | 200.87096 | 1.13225 | .05899 | -.04304 | -.00291 | .00005 | -.01337 | 83.00945 | 1.24492 |
| | GRADIENT | -.00303 | .02173 | .01412 | -.00265 | .00091 | -.00032 | .00047 | -.00076 | -.00009 | .13417 |

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TABULATED SOURCE DATA - QA82

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QA82 CFHT113 MODEL 32-O ORB W/N52 (AIR)

(RHLO35) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 200.000
 PCRC5 = 261.000 TCRC5 = 60.000
 T/QA = 60.000 RN/L = 1.350

RUN NO. 49/ 0 RN/L = 1.29 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.340 | -9.521 | -.04434 | 200.89636 | -.18656 | .09714 | -.04617 | -.00074 | .00355 | -.01177 | 260.80800 | -1.32582 |
| 10.340 | -6.434 | -.05331 | 201.03469 | -.14595 | .08847 | -.03716 | -.00237 | .00576 | -.01527 | 260.62432 | -1.29994 |
| 10.340 | -3.456 | -.06247 | 200.87774 | -.10403 | .08027 | -.03234 | -.00337 | .00700 | -.01753 | 260.32183 | -1.14562 |
| 10.340 | -.374 | -.08332 | 200.98477 | -.06321 | .06948 | -.03200 | -.00573 | .01049 | -.02528 | 260.48925 | -.89792 |
| 10.340 | 2.806 | -.09991 | 201.06933 | -.02472 | .06499 | -.02567 | -.00756 | .01231 | -.02695 | 260.27367 | -.43751 |
| 10.340 | 5.860 | -.09441 | 200.91167 | .02343 | .08138 | -.01852 | -.00673 | .01085 | -.02379 | 260.33790 | .26853 |
| 10.340 | 8.791 | -.07329 | 201.09801 | .08265 | .05807 | -.01416 | -.00499 | .00679 | -.01713 | 260.45712 | 1.03975 |
| 10.340 | 12.036 | -.04598 | 201.12916 | .16929 | .05618 | -.01343 | -.00242 | .00249 | -.00944 | 260.60844 | 1.70491 |
| 10.340 | 15.124 | -.04174 | 200.93974 | .26074 | .05657 | -.01270 | -.00189 | .00179 | -.00897 | 260.67276 | 1.93213 |
| 10.340 | 20.194 | -.04590 | 200.93858 | .43665 | .05754 | -.01085 | -.00250 | .00228 | -.01183 | 260.77256 | 1.90465 |
| 10.340 | 25.503 | -.06087 | 200.94469 | .64870 | .05837 | -.01386 | -.00369 | .00340 | -.01561 | 260.74038 | 1.68793 |
| 10.340 | 30.470 | -.05230 | 201.02772 | .87401 | .05783 | -.02490 | -.00328 | .00207 | -.01430 | 260.92390 | 1.46841 |
| 10.340 | 35.733 | -.05244 | 201.04566 | 1.12156 | .05717 | -.04320 | -.00356 | .00129 | -.01481 | 260.77256 | 1.25039 |
| | GRADIENT | -.00597 | .03057 | .01266 | -.00243 | .00107 | -.00067 | .00085 | -.00150 | -.00801 | .11328 |

OA82 CFHT113 MODEL 32-O ORB W/N52

(AIR)

(RHLO36) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 200.000
 PCRC5 = 478.000 TCRC5 = 81.000
 T/QA = 110.000 RN/L = 1.350

RUN NO. 30/ D RN/L = 1.29 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.340 | -9.455 | -.07269 | 200.94912 | -.18868 | .09245 | -.04518 | -.00395 | .01052 | -.02476 | 477.35704 | -1.39892 |
| 10.340 | -8.462 | -.08693 | 201.22120 | -.15059 | .08438 | -.03562 | -.00613 | .01312 | -.02943 | 477.07113 | -1.39027 |
| 10.340 | -3.480 | -.12830 | 201.22747 | -.11183 | .07380 | -.03432 | -.01228 | .02143 | -.05058 | 477.96746 | -1.33178 |
| 10.340 | -.289 | -.13954 | 201.09801 | -.07383 | .06801 | -.03199 | -.01229 | .02089 | -.04452 | 476.57397 | -1.07475 |
| 10.340 | 2.678 | -.12422 | 201.12966 | -.03703 | .06433 | -.02639 | -.01016 | .01648 | -.03476 | 476.65769 | -.63959 |
| 10.340 | 5.977 | -.09275 | 201.34885 | .01678 | .05883 | -.01891 | -.00674 | .01038 | -.02304 | 476.71181 | .17525 |
| 10.340 | 8.981 | -.06776 | 201.26719 | .08004 | .05528 | -.01452 | -.00435 | .00596 | -.01456 | 477.69192 | 1.04964 |
| 10.340 | 12.073 | -.05590 | 201.35156 | .16092 | .05375 | -.01320 | -.00336 | .00386 | -.01142 | 480.87329 | 1.69476 |
| 10.340 | 15.072 | -.05820 | 201.46493 | .25000 | .05370 | -.01327 | -.00323 | .00397 | -.01259 | 480.56246 | 1.94625 |
| 10.340 | 20.130 | -.05985 | 201.41086 | .42730 | .05565 | -.01225 | -.00332 | .00438 | -.01639 | 480.17372 | 1.91686 |
| 10.340 | 25.424 | -.06695 | 201.33350 | .63718 | .05593 | -.01538 | -.00391 | .00486 | -.01962 | 479.58772 | 1.70170 |
| 10.340 | 30.812 | -.06785 | 201.41261 | .88328 | .05613 | -.02584 | -.00416 | .00421 | -.02037 | 478.83428 | 1.45785 |
| 10.340 | 35.783 | -.06710 | 201.54333 | 1.11652 | .05436 | -.04360 | -.00442 | .00367 | -.02224 | 478.35631 | 1.25402 |
| | GRADIENT | .00061 | -.01619 | .01214 | -.00154 | .00128 | .00034 | -.00080 | .00256 | -.21551 | .11200 |

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TABULATED SOURCE DATA - QAB2

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QAB2 CFHT113 MODEL 32-Q ORB W/N52 (AIR)

(RHLO37) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 200.000
 PCRC5 = 695.000 TCRC5 = 67.000
 T/QA = 160.000 RN/L = 1.350

RUN NO. 51/ 0 RN/L = 1.29 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CSL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.340 | -9.349 | -.12486 | 201.26571 | -.19217 | .08873 | -.04319 | -.01117 | .02325 | -.05080 | 697.66242 | -1.50203 |
| 10.340 | -6.321 | -.15630 | 201.33299 | -.15405 | .07942 | -.03289 | -.01530 | .02841 | -.06030 | 695.38195 | -1.50350 |
| 10.340 | -3.369 | -.17015 | 201.36507 | -.11748 | .07116 | -.03535 | -.01705 | .02950 | -.06580 | 697.58181 | -1.45073 |
| 10.340 | -.375 | -.15806 | 201.44486 | -.08121 | .06655 | -.03321 | -.01442 | .02439 | -.05259 | 696.45313 | -1.20400 |
| 10.340 | 2.768 | -.12932 | 201.66972 | -.04094 | .06321 | -.02657 | -.01095 | .01720 | -.03741 | 697.20052 | -.71850 |
| 10.340 | 5.827 | -.09231 | 201.62841 | .00839 | .05776 | -.01973 | -.00649 | .01007 | -.02194 | 695.69679 | .04262 |
| 10.340 | 8.781 | -.07288 | 201.57944 | .06758 | .05399 | -.01533 | -.00462 | .00666 | -.01565 | 695.99122 | .91952 |
| 10.340 | 11.971 | -.07472 | 201.66980 | .15242 | .05245 | -.01306 | -.00492 | .00815 | -.01504 | 694.89500 | 1.66684 |
| 10.340 | 15.300 | -.07799 | 201.81078 | .25163 | .05245 | -.01284 | -.00488 | .00613 | -.01604 | 697.66242 | 1.95640 |
| 10.340 | 20.435 | -.07808 | 201.78573 | .43390 | .05483 | -.01330 | -.00445 | .00668 | -.02127 | 694.69590 | 1.90980 |
| 10.340 | 25.511 | -.08683 | 201.79442 | .63369 | .05432 | -.01502 | -.00508 | .00752 | -.02572 | 695.86709 | 1.70377 |
| 10.340 | 30.697 | -.08957 | 202.03996 | .87015 | .05451 | -.02633 | -.00544 | .00675 | -.02555 | 694.39794 | 1.46699 |
| 10.340 | 35.700 | -.08579 | 202.02035 | 1.10656 | .04948 | -.04277 | -.00555 | .00578 | -.02760 | 697.41131 | 1.26804 |
| | GRADIENT | .00667 | .04982 | .01247 | -.00129 | .00144 | .00099 | -.00201 | .00463 | -.05964 | .11961 |

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QA82 CFHT113 MODEL 32-Q ORB W/N52

(AIR)

(RHLO38) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT, XMRP = 1076.7000 IN.
 LREF = 474.8100 IN, YMRP = .0000 IN.
 BREF = 936.6600 IN, ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 125.000
 PCRC5 = 76.000 TCRC5 = 62.000
 T/QA = 28.500 RM/L = .850

RUN NO. 53/ 0 RM/L = .85 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|----------|----------|
| 10.320 | -9.378 | -.03128 | 124.66135 | -.18884 | .10384 | -.04452 | .00042 | .00081 | -.00470 | 76.00177 | -1.27050 |
| 10.320 | -8.325 | -.03134 | 124.62329 | -.14983 | .09469 | -.03637 | -.00005 | .00116 | -.00545 | 77.91806 | -1.21453 |
| 10.320 | -3.365 | -.03144 | 124.65568 | -.10301 | .08492 | -.03272 | -.00023 | .00139 | -.00584 | 77.82970 | -1.07744 |
| 10.320 | -.311 | -.03684 | 124.67431 | -.05844 | .07343 | -.03241 | -.00139 | .00312 | -.01019 | 77.91341 | -.75974 |
| 10.320 | 2.639 | -.04662 | 124.63602 | -.01233 | .06989 | -.02670 | -.00316 | .00552 | -.01359 | 77.91341 | -.22807 |
| 10.320 | 5.814 | -.05243 | 124.67538 | .03284 | .06638 | -.01960 | -.00404 | .00637 | -.01500 | 78.00643 | .37416 |
| 10.320 | 8.972 | -.05189 | 124.72222 | .09823 | .06397 | -.01455 | -.00413 | .00562 | -.01438 | 77.82506 | 1.08796 |
| 10.320 | 12.018 | -.04277 | 124.58348 | .17255 | .06241 | -.01343 | -.00279 | .00330 | -.01036 | 78.00643 | 1.60644 |
| 10.320 | 14.930 | -.03043 | 124.56037 | .26233 | .06218 | -.01259 | -.00129 | .00092 | -.00654 | 77.84365 | 1.83999 |
| 10.320 | 20.098 | -.03946 | 124.58094 | .44187 | .06359 | -.01037 | -.00253 | .00213 | -.01032 | 78.00177 | 1.85830 |
| 10.320 | 25.232 | -.04195 | 124.62247 | .64550 | .06399 | -.01291 | -.00300 | .00230 | -.01194 | 77.84365 | 1.67134 |
| 10.320 | 30.330 | -.04004 | 124.80952 | .87368 | .06429 | -.02353 | -.00285 | .00150 | -.01180 | 77.99245 | 1.45293 |
| 10.320 | 35.517 | -.03538 | 124.84159 | 1.12300 | .06415 | -.03975 | -.00264 | .00045 | -.01169 | 77.92737 | 1.24437 |
| | GRADIENT | -.00245 | -.00322 | .01461 | -.00242 | .00097 | -.00047 | .00067 | -.00125 | .01342 | .13707 |

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TABULATED SOURCE DATA - QAB2

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QAB2 CPHT113 MODEL 32-O ORB W/NS2 (AIR)

(RHLO39) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 125.000
 PCRC8 = 98.000 TCRC8 = 82.000
 T/QA = 36.000 RN/L = .850

RUN NO. 54/ 0 RN/L = .81 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC8 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|----------|----------|
| 10.320 | -9.434 | -.03059 | 124.87743 | -.19028 | .10412 | -.04557 | .00029 | .00130 | -.00638 | 97.85281 | -1.27442 |
| 10.320 | -6.257 | -.03422 | 124.91909 | -.14707 | .09397 | -.03853 | -.00052 | .00222 | -.00782 | 97.76319 | -1.24230 |
| 10.320 | -3.266 | -.03487 | 124.92329 | -.10094 | .08476 | -.03322 | -.00092 | .00272 | -.00878 | 97.83511 | -1.08171 |
| 10.320 | -.297 | -.04076 | 124.84912 | -.05646 | .07270 | -.03296 | -.00227 | .00475 | -.01414 | 97.60165 | -.76830 |
| 10.320 | 2.822 | -.05252 | 125.01088 | -.01570 | .06877 | -.02651 | -.00422 | .00714 | -.01703 | 97.66181 | -.28074 |
| 10.320 | 5.888 | -.05782 | 124.86887 | .03167 | .06611 | -.01943 | -.00501 | .00790 | -.01841 | 97.75730 | .35818 |
| 10.320 | 8.816 | -.05392 | 124.84598 | .09227 | .06365 | -.01509 | -.00463 | .00646 | -.01649 | 97.76909 | 1.05694 |
| 10.320 | 12.014 | -.04305 | 124.89415 | .17374 | .06192 | -.01329 | -.00285 | .00358 | -.01076 | 97.76319 | 1.62360 |
| 10.320 | 14.929 | -.03253 | 124.84793 | .26282 | .06143 | -.01278 | -.00141 | .00110 | -.00774 | 97.75730 | 1.87412 |
| 10.320 | 20.167 | -.03980 | 124.84434 | .44728 | .06279 | -.01067 | -.00254 | .00216 | -.01104 | 97.85281 | 1.86826 |
| 10.320 | 25.281 | -.04446 | 124.85493 | .65168 | .06375 | -.01356 | -.00333 | .00277 | -.01341 | 97.84101 | 1.87296 |
| 10.320 | 30.420 | -.04104 | 124.98509 | .88613 | .06437 | -.02415 | -.00297 | .00174 | -.01270 | 97.84101 | 1.45097 |
| 10.320 | 35.480 | -.03576 | 125.02206 | 1.12738 | .06338 | -.04036 | -.00275 | .00057 | -.01216 | 97.75730 | 1.24829 |
| | GRADIENT | -.00291 | .01470 | .01399 | -.00261 | .00111 | -.00054 | .00073 | -.00135 | -.02906 | .12852 |

QAS2 CFHT113 MODEL 32-Q CRB W/N32

(AIR)

(RHLO40) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRCs = 261.000 TCRCs = 79.000
 T/QA = 96.000 RN/L = .850

RUN NO. 95/ D RN/L = .62 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.379 | -.05073 | 125.02483 | -.19434 | .09845 | -.04485 | -.00296 | .00848 | -.02030 | 260.84019 | -1.36401 |
| 10.320 | -6.299 | -.08245 | 125.13673 | -.19415 | .08926 | -.03557 | -.00359 | .01197 | -.02674 | 260.92390 | -1.55776 |
| 10.320 | -3.369 | -.08304 | 125.09978 | -.11232 | .07881 | -.03636 | -.01077 | .01905 | -.04560 | 260.68684 | -1.26334 |
| 10.320 | -.232 | -.09384 | 125.14146 | -.07219 | .07138 | -.03313 | -.01163 | .01967 | -.04167 | 260.64080 | -1.00323 |
| 10.320 | 2.728 | -.08766 | 125.13040 | -.03394 | .06861 | -.02803 | -.01000 | .01630 | -.03403 | 260.62452 | -.55544 |
| 10.320 | 5.908 | -.07253 | 125.14394 | .02094 | .06379 | -.01953 | -.00719 | .01127 | -.02438 | 260.60512 | .21739 |
| 10.320 | 8.955 | -.05422 | 125.23892 | .08471 | .06069 | -.01532 | -.00473 | .00626 | -.01509 | 260.47319 | 1.01498 |
| 10.320 | 11.885 | -.04439 | 125.13402 | .16168 | .05927 | -.01461 | -.00311 | .00346 | -.01002 | 260.25418 | 1.59924 |
| 10.320 | 14.994 | -.04310 | 125.18883 | .25636 | .05803 | -.01407 | -.00282 | .00336 | -.01089 | 260.30533 | 1.88722 |
| 10.320 | 20.169 | -.04591 | 125.16530 | .43987 | .06084 | -.01221 | -.00317 | .00376 | -.01401 | 260.84019 | 1.87727 |
| 10.320 | 25.145 | -.04926 | 125.39143 | .63966 | .06197 | -.01413 | -.00369 | .00392 | -.01583 | 260.69214 | 1.69564 |
| 10.320 | 30.427 | -.04952 | 125.38235 | .88174 | .06209 | -.02429 | -.00381 | .00350 | -.01645 | 260.72430 | 1.45747 |
| 10.320 | 35.529 | -.05064 | 125.37115 | 1.12969 | .06187 | -.04114 | -.00408 | .00306 | -.01745 | 260.80800 | 1.24982 |
| | GRADIENT | -.00078 | .00310 | .01285 | -.00165 | .00169 | .00012 | -.00044 | .00189 | -.01060 | .11581 |

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TABULATED SOURCE DATA - QAS2

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QAS2 CPMT113 MODEL 32-Q QRS W/N32 (AIR)

(RMLO41) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 373.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 125.000
 PCRCs = 473.000 TCRCs = 63.000
 T/GA = 174.000 RN/L = .850

RUN NO. 58/ 0 RN/L = .81 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.400 | -.10175 | 125.21180 | -.20856 | .08984 | -.04207 | -.01454 | .02906 | -.06236 | 471.52180 | -1.35732 |
| 10.320 | -6.300 | -.11131 | 125.40809 | -.16884 | .08219 | -.03307 | -.01938 | .03260 | -.08031 | 472.30027 | -1.58445 |
| 10.320 | -3.391 | -.11953 | 125.31674 | -.12545 | .07545 | -.03833 | -.01784 | .03090 | -.06749 | 472.38397 | -1.45973 |
| 10.320 | -.193 | -.11126 | 125.34287 | -.08328 | .06997 | -.03377 | -.01489 | .02503 | -.05206 | 472.02406 | -1.18213 |
| 10.320 | 2.765 | -.08986 | 125.41422 | -.04492 | .06643 | -.02677 | -.01092 | .01690 | -.03300 | 472.94487 | -.74904 |
| 10.320 | 5.972 | -.06434 | 125.36537 | .01263 | .06129 | -.01996 | -.00629 | .00936 | -.01981 | 472.47193 | .09931 |
| 10.320 | 8.916 | -.05896 | 125.43601 | .07437 | .05888 | -.01656 | -.00324 | .00722 | -.01574 | 474.72755 | .92322 |
| 10.320 | 11.845 | -.05830 | 125.39618 | .14490 | .05305 | -.01277 | -.00499 | .00874 | -.01543 | 472.30450 | 1.56072 |
| 10.320 | 15.027 | -.06333 | 125.50554 | .24673 | .05664 | -.01380 | -.00546 | .00671 | -.01636 | 472.41329 | 1.88424 |
| 10.320 | 20.121 | -.06230 | 125.42341 | .43082 | .05917 | -.01362 | -.00507 | .00749 | -.02222 | 474.56481 | 1.88540 |
| 10.320 | 25.200 | -.06783 | 125.53385 | .63522 | .05947 | -.01456 | -.00553 | .00792 | -.02545 | 472.41329 | 1.69433 |
| 10.320 | 30.505 | -.06878 | 125.47447 | .88394 | .06017 | -.02547 | -.00589 | .00752 | -.02658 | 471.13249 | 1.46051 |
| 10.320 | 35.424 | -.07088 | 125.54123 | 1.12178 | .05984 | -.04173 | -.00812 | .00714 | -.02779 | 471.57624 | 1.25864 |
| | GRADIENT | .00479 | .01573 | .01308 | -.00147 | .00187 | .00112 | -.00227 | .00327 | .08841 | .11507 |

OA82 CPMT113 MODEL 32-0 CRB W/N52

(AIR)

(RHLO42) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 373.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 125.000
 PCRC5 = 702.000 TCRC5 = 88.000
 T/QA = 258.000 RN/L = .850

RUN NO. 57/ 0 RN/L = .82 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.368 | -.14699 | 125.57486 | -.22231 | .08398 | -.03744 | -.02656 | .04820 | -.10076 | 702.89584 | -1.69679 |
| 10.320 | -8.503 | -.14216 | 125.63150 | -.17874 | .07856 | -.03562 | -.02533 | .04382 | -.10078 | 703.52358 | -1.71606 |
| 10.320 | -3.320 | -.13429 | 125.77710 | -.13035 | .07204 | -.03864 | -.02040 | .03523 | -.07698 | 703.81277 | -1.38514 |
| 10.320 | -.338 | -.11771 | 125.79765 | -.09244 | .06731 | -.03513 | -.01647 | .02669 | -.05472 | 704.31891 | -1.35639 |
| 10.320 | 2.744 | -.08942 | 125.97493 | -.05136 | .06391 | -.02787 | -.01074 | .01662 | -.03280 | 704.06387 | -.88560 |
| 10.320 | 5.905 | -.07577 | 125.90259 | -.00079 | .05922 | -.02171 | -.00756 | .01176 | -.02278 | 703.94416 | -.11687 |
| 10.320 | 9.007 | -.07903 | 125.94503 | .06197 | .05611 | -.01780 | -.00773 | .01135 | -.02141 | 703.52174 | .80501 |
| 10.320 | 11.967 | -.08102 | 125.97822 | .13944 | .05426 | -.01484 | -.00802 | .01108 | -.02135 | 703.77673 | 1.52634 |
| 10.320 | 14.865 | -.08471 | 125.98987 | .23326 | .05433 | -.01386 | -.00810 | .01082 | -.02258 | 703.35433 | 1.88260 |
| 10.320 | 20.017 | -.08390 | 126.02905 | .41963 | .05638 | -.01466 | -.00737 | .01118 | -.02813 | 703.64923 | 1.90716 |
| 10.320 | 25.115 | -.08348 | 126.14242 | .62081 | .05699 | -.01474 | -.00696 | .01195 | -.03644 | 703.35032 | 1.70717 |
| 10.320 | 30.356 | -.09161 | 126.15076 | .86726 | .05727 | -.02577 | -.00800 | .01189 | -.03565 | 703.31058 | 1.47507 |
| 10.320 | 35.556 | -.09395 | 126.08650 | 1.12543 | .05722 | -.04328 | -.00830 | .01149 | -.03702 | 703.27063 | 1.25869 |
| | GRADIENT | .00741 | .03276 | .01303 | -.00134 | .00181 | .00159 | -.00307 | .00728 | .04072 | .11557 |

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TABULATED SOURCE DATA - OA82

PAGE 47

OA82 CFHT113 MODEL 32-O CRB W/N85 (AIR)

(RHLO43) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
LREF = 474.8100 IN. YMRP = .0000 IN.
BREF = 936.6800 IN. ZMRP = 375.0000 IN.
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
PCRC5 = 79.000 TCRC5 = 83.000
T/OA = 28.500 RN/L = .850

RUN NO. 36/0 RN/L = .82 GRADIENT INTERVAL = -3.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CSL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|----------|----------|
| 10.320 | -9.408 | -.02318 | 125.56830 | -.18788 | .10817 | -.04733 | .00081 | -.00152 | .00041 | 78.42501 | -1.21997 |
| 10.320 | -8.378 | -.02572 | 125.64425 | -.15498 | .09503 | -.03745 | -.00088 | -.00154 | .01105 | 78.48996 | -1.28479 |
| 10.320 | -3.452 | -.02249 | 125.70055 | -.10854 | .08562 | -.03622 | -.00020 | -.00209 | .00879 | 78.57366 | -1.12190 |
| 10.320 | -.285 | -.01832 | 125.68371 | -.06261 | .07748 | -.03227 | .00010 | -.00282 | .00570 | 78.66205 | -.79984 |
| 10.320 | 2.822 | -.01817 | 125.67397 | -.01450 | .07312 | -.02427 | -.00038 | -.00284 | .00520 | 78.75045 | -.25013 |
| 10.320 | 5.819 | -.01924 | 125.54031 | .03882 | .06925 | -.01874 | -.00001 | -.00224 | .00267 | 78.93201 | .43390 |
| 10.320 | 8.921 | -.02230 | 125.52458 | .09662 | .06591 | -.01151 | -.00167 | -.00243 | .00494 | 78.75987 | 1.06415 |
| 10.320 | 12.042 | -.02277 | 125.69491 | .17235 | .06359 | -.00846 | -.00159 | -.00270 | .00564 | 78.82945 | 1.58217 |
| 10.320 | 15.014 | -.02865 | 125.63818 | .26036 | .06186 | -.00577 | -.00271 | -.00208 | .00384 | 78.83887 | 1.85116 |
| 10.320 | 20.139 | -.03182 | 125.56800 | .44453 | .06347 | -.00408 | -.00328 | -.00189 | .00196 | 79.00629 | 1.85991 |
| 10.320 | 25.377 | -.03468 | 125.56092 | .66166 | .06531 | -.00849 | -.00367 | -.00177 | -.00014 | 78.92730 | 1.66335 |
| 10.320 | 30.456 | -.04051 | 125.63120 | .89186 | .06497 | -.01946 | -.00422 | -.00173 | -.00166 | 78.83887 | 1.44836 |
| 10.320 | 35.544 | -.04221 | 125.57136 | 1.14024 | .06482 | -.03588 | -.00476 | -.00225 | -.00288 | 78.93201 | 1.24985 |
| | GRADIENT | .00069 | -.00392 | .01499 | -.00199 | .00190 | -.00003 | -.00012 | -.00057 | .02818 | .13877 |

QAS2 CPHT113 MODEL 32-0 ORB W/N49

(AIR)

(RHLO44) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1078.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6600 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(P8F) = 125.000
 PCRC5 = 78.000 TCRC5 = 83.000
 T/GA = 28.300 RN/L = .850

RUN NO. 59/ 0 RN/L = .82 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(P8F) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|----------|----------|
| 10.320 | -9.493 | -.01685 | 125.63010 | -.19745 | .10324 | -.04336 | -.00012 | -.00309 | .00346 | 77.99245 | -1.30086 |
| 10.320 | -6.336 | -.01793 | 125.60983 | -.13272 | .09440 | -.03445 | -.00055 | -.00277 | .00621 | 77.91341 | -1.27727 |
| 10.320 | -3.417 | -.02093 | 125.63462 | -.10850 | .08415 | -.03150 | -.00074 | -.00235 | .00339 | 77.74600 | -1.14176 |
| 10.320 | -.213 | -.02016 | 125.53329 | -.06099 | .07566 | -.02756 | -.00071 | -.00216 | .00366 | 77.75328 | -.80000 |
| 10.320 | 2.734 | -.02152 | 125.57374 | -.01924 | .07090 | -.02027 | -.00156 | -.00184 | .00313 | 77.75993 | -.32333 |
| 10.320 | 5.944 | -.02297 | 125.55231 | .03212 | .06548 | -.01240 | -.00189 | -.00161 | .00332 | 77.92271 | .36766 |
| 10.320 | 8.644 | -.02402 | 125.57097 | .09032 | .06283 | -.00681 | -.00251 | -.00207 | .00365 | 77.92737 | 1.04765 |
| 10.320 | 11.933 | -.02674 | 125.59591 | .16438 | .05993 | -.00249 | -.00309 | -.00199 | .00398 | 77.91806 | 1.60138 |
| 10.320 | 15.132 | -.03120 | 125.69942 | .25968 | .05682 | -.00162 | -.00339 | -.00207 | .00390 | 78.08082 | 1.88915 |
| 10.320 | 20.234 | -.03234 | 125.62278 | .44524 | .06023 | -.00019 | -.00351 | -.00217 | .00270 | 78.00177 | 1.88410 |
| 10.320 | 25.301 | -.03499 | 125.60290 | .65186 | .06122 | -.00377 | -.00387 | -.00242 | .00144 | 78.00177 | 1.68649 |
| 10.320 | 30.334 | -.03860 | 125.64412 | .88403 | .06116 | -.01412 | -.00445 | -.00247 | -.00013 | 77.91806 | 1.46644 |
| 10.320 | 35.455 | -.04482 | 125.65456 | 1.13202 | .06005 | -.03051 | -.00520 | -.00283 | -.00101 | 77.75528 | 1.25734 |
| | GRADIENT | -.00009 | -.01351 | .01432 | -.00216 | .00182 | -.00013 | .00008 | -.00037 | .00227 | .13267 |

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TABULATED SOURCE DATA - OA82

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OA82 CFHT113 MODEL 32-O ORB W/N49 (AIR)

(RHLO45) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = 98.000 TCRC5 = 83.000
 T/QA = 36.000 RN/L = .850

RUN NO. 60/ 0 RN/L = .82 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|----------|----------|
| 10.320 | -9.418 | -.01647 | 125.65393 | -.19926 | .10435 | -.04093 | -.00068 | -.00344 | .00836 | 98.16401 | -1.32421 |
| 10.320 | -8.284 | -.02012 | 125.58032 | -.15402 | .09248 | -.03319 | -.00100 | -.00268 | .00811 | 98.17585 | -1.31433 |
| 10.320 | -3.375 | -.01983 | 125.68612 | -.10972 | .08292 | -.03017 | -.00109 | -.00271 | .00875 | 98.09214 | -1.17825 |
| 10.320 | -.209 | -.02213 | 125.60039 | -.08465 | .07509 | -.02470 | -.00148 | -.00212 | .00475 | 98.09214 | -.85464 |
| 10.320 | 2.914 | -.02332 | 125.68335 | -.02076 | .06883 | -.01793 | -.00198 | -.00207 | .00442 | 97.84101 | -.35794 |
| 10.320 | 5.849 | -.02402 | 125.65176 | .02808 | .06463 | -.01134 | -.00205 | -.00200 | .00427 | 97.75730 | .31754 |
| 10.320 | 8.992 | -.02799 | 125.62940 | .09001 | .06134 | -.00498 | -.00288 | -.00229 | .00500 | 97.76319 | 1.06242 |
| 10.320 | 11.968 | -.02980 | 125.80168 | .18184 | .05893 | -.00106 | -.00355 | -.00209 | .00487 | 97.82331 | 1.60168 |
| 10.320 | 15.113 | -.03221 | 125.78377 | .25573 | .05757 | .00010 | -.00389 | -.00211 | .00459 | 97.74351 | 1.89665 |
| 10.320 | 20.100 | -.03370 | 125.60420 | .43449 | .05835 | .00164 | -.00407 | -.00231 | .00368 | 97.85871 | 1.90078 |
| 10.320 | 25.377 | -.03858 | 125.68581 | .65314 | .06000 | -.00223 | -.00447 | -.00264 | .00259 | 97.91291 | 1.68914 |
| 10.320 | 30.268 | -.04201 | 125.60732 | .87491 | .05957 | -.01228 | -.00503 | -.00275 | .00141 | 97.85281 | 1.47359 |
| 10.320 | 35.535 | -.04696 | 125.60561 | 1.12984 | .05847 | -.02864 | -.00567 | -.00309 | .00023 | 97.68537 | 1.25726 |
| | GRADIENT | -.00056 | -.00049 | .01415 | -.00218 | .00194 | -.00014 | .00010 | -.00037 | -.03984 | .13037 |

QA82 CFHT113 MODEL 32-O CRB W/N49 (AIR)

(RMLO46) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRS = 261.000 TCRC = 83.000
 T/QA = 96.000 RN/L = .850

RUN NO. 81/ 0 RN/L = .82 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRS | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.429 | -.00827 | 125.74144 | -.22139 | .09480 | -.02482 | -.00418 | -.00536 | .02093 | 260.28972 | -1.56305 |
| 10.320 | -6.267 | -.01351 | 125.68297 | -.17153 | .08382 | -.01933 | -.00389 | -.00427 | .01889 | 260.07071 | -1.58130 |
| 10.320 | -3.345 | -.01419 | 125.63822 | -.12483 | .07373 | -.01810 | -.00386 | -.00424 | .01441 | 260.67276 | -1.48748 |
| 10.320 | -.192 | -.01419 | 125.67877 | -.08171 | .06803 | -.01302 | -.00386 | -.00409 | .00998 | 260.30533 | -1.22904 |
| 10.320 | 2.922 | -.01709 | 125.79783 | -.03793 | .06013 | -.00565 | -.00420 | -.00402 | .00909 | 260.87562 | -.70419 |
| 10.320 | 5.837 | -.02004 | 125.76773 | .01274 | .05871 | .00042 | -.00442 | -.00381 | .00927 | 260.87562 | .11973 |
| 10.320 | 8.908 | -.02463 | 125.69071 | .07661 | .05341 | .00452 | -.00461 | -.00353 | .00935 | 261.07522 | 1.04322 |
| 10.320 | 12.065 | -.03129 | 125.73617 | .15081 | .04960 | .00813 | -.00585 | -.00350 | .00930 | 260.90780 | 1.71341 |
| 10.320 | 14.943 | -.03762 | 125.73550 | .23739 | .04937 | .01042 | -.00673 | -.00348 | .01003 | 260.74038 | 1.98905 |
| 10.320 | 20.108 | -.04423 | 125.66234 | .41667 | .05074 | .01421 | -.00767 | -.00383 | .01047 | 261.02372 | 1.95834 |
| 10.320 | 25.323 | -.05324 | 125.75647 | .62975 | .05269 | .01190 | -.00859 | -.00423 | .00993 | 260.82409 | 1.72460 |
| 10.320 | 30.479 | -.06241 | 125.79924 | .86281 | .05283 | .00153 | -.00913 | -.00454 | .00986 | 260.95932 | 1.48346 |
| 10.320 | 35.545 | -.06772 | 125.78961 | 1.10916 | .05176 | -.01533 | -.00953 | -.00507 | .00791 | 260.94000 | 1.27000 |
| | GRADIENT | -.00046 | .02544 | .01387 | -.00217 | .00199 | -.00005 | .00004 | -.00085 | .03219 | .12490 |

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TABULATED SOURCE DATA - QA82

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QA82 CFHT113 MODEL 32-O ORB.W/N49 (AIR)

(RHLO47) (03 SEP 74)

REFERENCE DATA

BREF = 2890.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 129.000
 PCRC5 = 473.000 TCRC5 = 83.000
 T/QA = 174.000 RN/L = .850

RUN NO. 82/ 0 RN/L = .82 GRADIENT INTERVAL = -5.00/ 5.00

| HACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.356 | -.00440 | 125.61098 | -.24359 | .08224 | -.00447 | -.00818 | -.00559 | .03171 | 473.30908 | -1.87983 |
| 10.320 | -8.406 | -.00898 | 125.68405 | -.19860 | .06967 | -.00149 | -.00890 | -.00481 | .02494 | 473.22537 | -2.07452 |
| 10.320 | -3.264 | -.00617 | 125.78493 | -.15082 | .06090 | -.00026 | -.00867 | -.00627 | .01952 | 473.02838 | -2.11996 |
| 10.320 | -.243 | -.00766 | 125.78760 | -.10892 | .05425 | .00375 | -.00802 | -.00619 | .01575 | 473.05794 | -1.98643 |
| 10.320 | 2.918 | -.01207 | 125.82058 | -.05810 | .04964 | .01040 | -.00777 | -.00603 | .01504 | 472.91551 | -1.29900 |
| 10.320 | 3.838 | -.01608 | 125.76939 | -.00827 | .04497 | .01606 | -.00722 | -.00613 | .01537 | 473.08730 | -.29162 |
| 10.320 | 8.930 | -.02130 | 125.86469 | .05929 | .04191 | .01899 | -.00742 | -.00592 | .01590 | 472.91551 | 1.02831 |
| 10.320 | 12.035 | -.02916 | 125.85546 | .13860 | .03902 | .02111 | -.00837 | -.00592 | .01654 | 472.91988 | 1.89837 |
| 10.320 | 15.275 | -.03830 | 125.98874 | .23436 | .03923 | .02313 | -.00912 | -.00577 | .01714 | 472.80246 | 2.16639 |
| 10.320 | 20.130 | -.05075 | 126.03854 | .40149 | .04021 | .02708 | -.01032 | -.00603 | .01778 | 472.80246 | 2.06404 |
| 10.320 | 25.391 | -.06287 | 125.98101 | .61145 | .04201 | .02641 | -.01153 | -.00656 | .01763 | 472.80246 | 1.78046 |
| 10.320 | 30.333 | -.07494 | 126.10552 | .83347 | .04256 | .01834 | -.01258 | -.00711 | .01702 | 472.80246 | 1.52492 |
| 10.320 | 35.594 | -.08798 | 126.02860 | 1.08696 | .04212 | .00193 | -.01344 | -.00762 | .01581 | 472.77745 | 1.28858 |
| | GRADIENT | -.00096 | .00582 | .01501 | -.00182 | .00173 | .00015 | .00004 | -.00072 | -.01850 | .13345 |

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QA82 CFHT113 MODEL 32-O ORB W/H49

(AIR)

(RHLO48) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRCB = 702.000 TCRCB = 69.000
 T/QA = 256.000 RN/L = .850

RUN NO. \$3/ D RN/L = .83 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCB | L/D |
|--------|----------|---------|-----------|---------|---------|--------|---------|---------|---------|-----------|----------|
| 10.320 | -9.364 | .00602 | 125.81780 | -.26898 | .07020 | .01768 | -.01330 | -.00646 | .03821 | 702.89584 | -2.24687 |
| 10.320 | -6.238 | .00562 | 125.97595 | -.22264 | .05688 | .01872 | -.01351 | -.00780 | .03162 | 703.19072 | -2.68474 |
| 10.320 | -3.305 | .00560 | 125.99410 | -.17562 | .05010 | .01851 | -.01333 | -.00818 | .02468 | 703.27444 | -2.86730 |
| 10.320 | -.097 | -.00190 | 126.04637 | -.13172 | .04406 | .02306 | -.01244 | -.00805 | .02250 | 703.68915 | -2.97270 |
| 10.320 | 2.794 | -.00606 | 126.13634 | -.08790 | .03890 | .02919 | -.01200 | -.00853 | .02311 | 703.14697 | -2.59490 |
| 10.320 | 5.952 | -.01124 | 126.08514 | -.02954 | .03441 | .03425 | -.01107 | -.00859 | .02290 | 702.97955 | -1.05766 |
| 10.320 | 8.997 | -.01850 | 126.29289 | .03664 | .03123 | .03622 | -.01080 | -.00847 | .02318 | 703.84537 | .85607 |
| 10.320 | 11.920 | -.02779 | 126.27495 | .11298 | .02941 | .03700 | -.01120 | -.00835 | .02343 | 703.22688 | 2.00497 |
| 10.320 | 15.017 | -.03619 | 126.25753 | .20769 | .02971 | .03817 | -.01168 | -.00830 | .02409 | 703.23068 | 2.33809 |
| 10.320 | 20.195 | -.05252 | 126.28239 | .38918 | .03147 | .04154 | -.01282 | -.00853 | .02501 | 703.48181 | 2.16237 |
| 10.320 | 25.470 | -.06782 | 126.34570 | .59970 | .03224 | .04133 | -.01424 | -.00915 | .02547 | 703.05948 | 1.83818 |
| 10.320 | 30.340 | -.08229 | 126.29636 | .81730 | .03239 | .03339 | -.01516 | -.00977 | .02540 | 702.85586 | 1.56225 |
| 10.320 | 35.635 | -.10129 | 126.41230 | 1.07368 | .03332 | .01849 | -.01647 | -.01051 | .02453 | 703.27063 | 1.30737 |
| | GRADIENT | -.00192 | .02319 | .01437 | -.00184 | .00175 | .00022 | -.00006 | -.00027 | -.01817 | .04325 |

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TABULATED SOURCE DATA - QA82

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QA82 CFHT113 MODEL 32-O CRB W/N49 (AIR)

(RMLO49) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 373.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 125.000
 PCRC5 = 129.000 TCRC5 = 63.000
 T/QA = 47.500 RN/L = .850

RUN NO. 64/ 0 RN/L = .82 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.287 | -.01246 | 125.62072 | -.20307 | .10419 | -.03672 | -.00142 | -.00372 | .01239 | 128.88952 | -1.35398 |
| 10.320 | -8.223 | -.01503 | 125.52842 | -.15350 | .09131 | -.03054 | -.00154 | -.00300 | .01043 | 128.90520 | -1.32852 |
| 10.320 | -3.201 | -.01471 | 125.57323 | -.10715 | .08204 | -.02706 | -.00163 | -.00301 | .00925 | 128.89736 | -1.16500 |
| 10.320 | -.212 | -.01691 | 125.69463 | -.06629 | .07380 | -.02117 | -.00216 | -.00248 | .00706 | 128.88168 | -.89160 |
| 10.320 | 2.789 | -.01763 | 125.62139 | -.02080 | .06854 | -.01583 | -.00233 | -.00233 | .00585 | 128.91305 | -.35745 |
| 10.320 | 5.923 | -.01954 | 125.55990 | .03188 | .06336 | -.00879 | -.00257 | -.00223 | .00566 | 128.74561 | .37964 |
| 10.320 | 8.921 | -.02300 | 125.56899 | .09463 | .06048 | -.00265 | -.00348 | -.00241 | .00606 | 128.91305 | 1.13016 |
| 10.320 | 12.013 | -.02806 | 125.65719 | .17081 | .05787 | .00092 | -.00410 | -.00224 | .00597 | 128.71428 | 1.68217 |
| 10.320 | 15.109 | -.03227 | 125.67882 | .26368 | .05685 | .00304 | -.00457 | -.00230 | .00593 | 128.71428 | 1.93948 |
| 10.320 | 20.193 | -.03668 | 125.59169 | .44719 | .05818 | .00448 | -.00496 | -.00253 | .00472 | 128.88168 | 1.91237 |
| 10.320 | 25.335 | -.04112 | 125.57626 | .65716 | .05883 | .00019 | -.00533 | -.00291 | .00410 | 128.79798 | 1.70104 |
| 10.320 | 30.355 | -.04542 | 125.41334 | .86401 | .05872 | -.01034 | -.00589 | -.00322 | .00347 | 128.91305 | 1.47390 |
| 10.320 | 35.452 | -.05246 | 125.44406 | 1.11903 | .05804 | -.02650 | -.00642 | -.00365 | .00283 | 129.05693 | 1.26075 |
| | GRADIENT | -.00049 | .00802 | .01442 | -.00225 | .00187 | -.00012 | .00011 | -.00057 | .00262 | .13485 |

QA82 CFHT113 MODEL 32-O CRB W/N80

(AIR)

(RHLOSQ) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = 98.000 TCRC5 = 86.000
 T/QA = 36.000 RN/L = .650

RUN NO. 61/ 0 RN/L = .82 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | EBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|----------|----------|
| 10.320 | -9.338 | -.02899 | 124.33830 | -.19197 | .10827 | -.04767 | .00044 | .00021 | -.00281 | 97.91881 | -1.24546 |
| 10.320 | -8.335 | -.02658 | 124.42689 | -.14774 | .09872 | -.03865 | .00020 | .00015 | -.00279 | 97.82331 | -1.18815 |
| 10.320 | -3.385 | -.02644 | 124.29061 | -.10217 | .08930 | -.03507 | .00028 | .00013 | -.00296 | 97.92472 | -1.01614 |
| 10.320 | -.262 | -.02716 | 124.35278 | -.05694 | .07742 | -.03265 | -.00001 | .00045 | -.00394 | 97.99661 | -.72840 |
| 10.320 | 2.692 | -.03264 | 124.31109 | -.00739 | .07429 | -.02659 | -.00074 | .00175 | -.00617 | 97.99661 | -.15069 |
| 10.320 | 5.929 | -.03727 | 124.31321 | .04124 | .06917 | -.02101 | -.00158 | .00294 | -.00811 | 98.00252 | .46359 |
| 10.320 | 8.908 | -.03932 | 124.32518 | .10133 | .06370 | -.01578 | -.00213 | .00303 | -.00866 | 98.42104 | 1.11588 |
| 10.320 | 11.924 | -.04200 | 124.46639 | .17701 | .06483 | -.01236 | -.00271 | .00309 | -.00973 | 98.15217 | 1.59794 |
| 10.320 | 15.152 | -.03649 | 124.40883 | .27752 | .06329 | -.01197 | -.00205 | .00198 | -.00826 | 98.16993 | 1.88079 |
| 10.320 | 20.148 | -.03644 | 124.33766 | .45659 | .06482 | -.01019 | -.00217 | .00171 | -.00933 | 98.08622 | 1.86273 |
| 10.320 | 25.250 | -.03657 | 124.49880 | .66527 | .06634 | -.01260 | -.00246 | .00146 | -.01041 | 98.07439 | 1.66789 |
| 10.320 | 30.434 | -.03287 | 124.32196 | .90513 | .06661 | -.02418 | -.00217 | .00066 | -.01065 | 98.08031 | 1.44725 |
| 10.320 | 35.594 | -.02884 | 124.44838 | 1.16013 | .06599 | -.04277 | -.00226 | -.00014 | -.01114 | 97.99070 | 1.24153 |
| | GRADIENT | -.00099 | .00324 | .01510 | -.00239 | .00135 | -.00016 | .00026 | -.00051 | .01143 | .13795 |

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TABULATED SOURCE DATA - OA82

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OA82 CFHT113 MODEL 32-O CR8 W/N80 (AIR)

(RHLOS1) (03 SEP 74)

REFERENCE DATA

SREF = 2880.0000 SQ.FT. XMRP = 1078.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 125.000
 PCRS = 261.000 TCRC = 80.000
 T/QA = 98.000 RN/L = .850

RUN NO. 82/ 0 RN/L = .84 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CSL | CYN | CY | PCRS | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.320 | -9.378 | -.03237 | 124.74315 | -.19457 | .10817 | -.04849 | .00026 | .00171 | -.00644 | 260.77583 | -1.28008 |
| 10.320 | -8.357 | -.03369 | 124.66456 | -.19061 | .09577 | -.03803 | -.00051 | .00245 | -.00735 | 260.90780 | -1.24337 |
| 10.320 | -3.400 | -.03387 | 124.77524 | -.10587 | .08671 | -.03412 | -.00058 | .00242 | -.00733 | 260.60844 | -1.08295 |
| 10.320 | -.157 | -.03978 | 124.87139 | -.05824 | .07502 | -.03234 | -.00176 | .00420 | -.01184 | 260.42499 | -.77200 |
| 10.320 | 2.815 | -.05263 | 124.70835 | -.01355 | .07096 | -.02827 | -.00392 | .00724 | -.01621 | 260.74038 | -.24241 |
| 10.320 | 5.902 | -.05980 | 124.78074 | .03330 | .06679 | -.02017 | -.00532 | .00870 | -.01866 | 260.57296 | .37580 |
| 10.320 | 8.897 | -.05643 | 124.73850 | .09335 | .06351 | -.01438 | -.00511 | .00709 | -.01634 | 260.64060 | 1.06767 |
| 10.320 | 11.945 | -.04427 | 124.91779 | .17140 | .06195 | -.01320 | -.00311 | .00379 | -.01067 | 260.60844 | 1.61185 |
| 10.320 | 15.108 | -.03331 | 124.82472 | .27468 | .06196 | -.01239 | -.00156 | .00161 | -.00791 | 260.63667 | 1.89531 |
| 10.320 | 20.239 | -.04482 | 124.98660 | .45513 | .06320 | -.00896 | -.00302 | .00340 | -.01274 | 260.77583 | 1.86927 |
| 10.320 | 25.332 | -.04723 | 124.87902 | .66675 | .06425 | -.01289 | -.00341 | .00355 | -.01471 | 260.90780 | 1.67511 |
| 10.320 | 30.350 | -.03867 | 124.99178 | .89595 | .06466 | -.02407 | -.00256 | .00168 | -.01269 | 260.85952 | 1.45624 |
| 10.320 | 35.503 | -.03340 | 125.07598 | 1.14895 | .06359 | -.04163 | -.00236 | .00062 | -.01243 | 260.85952 | 1.24948 |
| | GRADIENT | -.00300 | -.01015 | .01485 | -.00255 | .00094 | -.00053 | .00077 | -.00143 | .02005 | .13465 |

OA82 CFHT113 MODEL 32-O ORB W/N80

(AIR)

(RHLO52) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 SREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRCB = 473.000 TCRCB = 83.000
 T/GA = 174.000 RN/L = .850

RUN NO. 83/ 0 RN/L = .80 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCB | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.320 | -9.360 | -.03600 | 124.51045 | -.19849 | .10322 | -.04909 | -.00042 | .00434 | -.01258 | 473.11229 | -1.32352 |
| 10.320 | -6.334 | -.04563 | 124.57001 | -.15221 | .09381 | -.03671 | -.00261 | .00708 | -.01731 | 473.02858 | -1.28076 |
| 10.320 | -3.302 | -.06059 | 124.69084 | -.10814 | .08187 | -.03700 | -.00597 | .01211 | -.03157 | 472.94051 | -1.17379 |
| 10.320 | -.324 | -.07072 | 124.74751 | -.06558 | .07449 | -.03348 | -.00703 | .01347 | -.02942 | 472.82748 | -.87052 |
| 10.320 | 2.858 | -.08304 | 124.72945 | -.02708 | .06985 | -.02565 | -.00918 | .01539 | -.03109 | 472.88616 | -.44631 |
| 10.320 | 5.941 | -.07694 | 124.66952 | .02297 | .06588 | -.01825 | -.00786 | .01242 | -.02537 | 472.94467 | .23600 |
| 10.320 | 8.999 | -.06090 | 124.80027 | .08876 | .06285 | -.01412 | -.00572 | .00797 | -.01823 | 472.88616 | 1.02476 |
| 10.320 | 12.029 | -.04043 | 124.75938 | .17167 | .06080 | -.01404 | -.00256 | .00302 | -.00946 | 472.96986 | 1.62980 |
| 10.320 | 15.009 | -.03826 | 124.76176 | .26339 | .06068 | -.01244 | -.00216 | .00288 | -.01052 | 472.91551 | 1.88221 |
| 10.320 | 20.074 | -.04335 | 124.88516 | .43697 | .06245 | -.00979 | -.00270 | .00377 | -.01447 | 472.88162 | 1.86435 |
| 10.320 | 25.418 | -.04604 | 124.75681 | .66097 | .06368 | -.01274 | -.00324 | .00406 | -.01695 | 473.02858 | 1.66944 |
| 10.320 | 30.390 | -.04062 | 124.86416 | .89035 | .06394 | -.02336 | -.00271 | .00253 | -.01528 | 472.96986 | 1.45514 |
| 10.320 | 35.541 | -.03999 | 124.96176 | 1.14239 | .06334 | -.04087 | -.00304 | .00209 | -.01633 | 472.77312 | 1.24757 |
| | GRADIENT | -.00365 | .00613 | .01315 | -.00195 | .00185 | -.00052 | .00053 | .00007 | -.00851 | .11827 |

DATE 31 OCT 74

TABULATED SOURCE DATA - OA82

PAGE 37

OA82 CFHT113 MODEL 32-O ORB W/N80

(AIR)

(RHLO53) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1078.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRCB = 702.000 YCRCB = 66.000
 T/OA = 258.000 RN/L = .850

RUN NO. 84/ 0 RN/L = .85 GRADIENT INTERVAL = -.5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCB | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.477 | -.09065 | 125.30236 | -.20089 | .09982 | -.04543 | -.00228 | .00864 | -.02143 | 703.72521 | -1.38146 |
| 10.320 | -8.427 | -.06286 | 125.38375 | -.15881 | .09115 | -.03632 | -.00568 | .01272 | -.02658 | 702.55357 | -1.36232 |
| 10.320 | -3.199 | -.09562 | 125.42878 | -.11409 | .07856 | -.03841 | -.01222 | .02251 | -.04990 | 703.93638 | -1.29148 |
| 10.320 | -.174 | -.10554 | 125.43666 | -.07571 | .07326 | -.03311 | -.01348 | .02326 | -.04702 | 702.84835 | -1.02721 |
| 10.320 | 2.861 | -.09498 | 125.44203 | -.03859 | .06918 | -.02586 | -.01119 | .01850 | -.03717 | 704.10768 | -.62516 |
| 10.320 | 5.879 | -.07746 | 125.60606 | .01327 | .06471 | -.01807 | -.00792 | .01249 | -.02585 | 702.42988 | .10002 |
| 10.320 | 8.868 | -.05865 | 125.50201 | .08278 | .06159 | -.01523 | -.00520 | .00729 | -.01668 | 703.22688 | .98199 |
| 10.320 | 11.940 | -.04452 | 125.50810 | .16394 | .05948 | -.01444 | -.00339 | .00395 | -.01058 | 703.01952 | 1.60764 |
| 10.320 | 15.186 | -.04451 | 125.54796 | .26508 | .05866 | -.01263 | -.00293 | .00433 | -.01341 | 703.48181 | 1.90730 |
| 10.320 | 20.251 | -.04958 | 125.59461 | .44355 | .06087 | -.00923 | -.00306 | .00539 | -.01868 | 702.85211 | 1.87556 |
| 10.320 | 25.402 | -.04880 | 125.69929 | .65486 | .06225 | -.01315 | -.00335 | .00490 | -.01992 | 703.93638 | 1.67536 |
| 10.320 | 30.531 | -.04913 | 125.68757 | .89846 | .06247 | -.02414 | -.00351 | .00425 | -.01937 | 703.64537 | 1.45455 |
| 10.320 | 35.494 | -.04928 | 125.74978 | 1.13982 | .06216 | -.04127 | -.00389 | .00386 | -.02039 | 702.38988 | 1.25196 |
| | GRADIENT | .00011 | .00219 | .01246 | -.00155 | .00210 | .00017 | -.00066 | .00210 | .02848 | .10997 |

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QAB2 CFHT113 MODEL 32-O CRB W/N79

(AIR)

(RHL034) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 125.000
 PCRC5 = 96.000 TCRC5 = 85.000
 T/QA = 36.000 RN/L = .850

RUN NO. 85/ 0 RN/L = .80 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|----------|----------|
| 10.320 | -9.484 | -.01878 | 125.16498 | -.19436 | .10687 | -.04529 | .00029 | -.00190 | .00201 | 97.73373 | -1.26882 |
| 10.320 | -6.306 | -.01813 | 125.09666 | -.14975 | .09594 | -.03606 | -.00015 | -.00216 | .00388 | 97.73373 | -1.23701 |
| 10.320 | -3.211 | -.01928 | 125.11706 | -.10127 | .08532 | -.03332 | -.00024 | -.00203 | .00354 | 97.81742 | -1.06031 |
| 10.320 | -.214 | -.02035 | 124.99936 | -.05762 | .07789 | -.02872 | -.00062 | -.00139 | .00258 | 97.82921 | -.73408 |
| 10.320 | 2.756 | -.01979 | 124.89507 | -.01352 | .07314 | -.02321 | -.00072 | -.00144 | .00186 | 97.84101 | -.23506 |
| 10.320 | 6.036 | -.02200 | 124.98345 | .03973 | .06758 | -.01552 | -.00121 | -.00149 | .00243 | 97.82921 | .45393 |
| 10.320 | 9.055 | -.02344 | 125.04066 | .10051 | .06439 | -.00977 | -.00165 | -.00166 | .00297 | 97.82331 | 1.12237 |
| 10.320 | 12.102 | -.02740 | 124.94413 | .17522 | .06203 | -.00539 | -.00258 | -.00146 | .00260 | 97.84101 | 1.62589 |
| 10.320 | 15.103 | -.02968 | 125.06051 | .26482 | .06059 | -.00350 | -.00295 | -.00150 | .00216 | 97.82331 | 1.88148 |
| 10.320 | 20.202 | -.03036 | 124.88266 | .44654 | .06125 | -.00202 | -.00296 | -.00171 | .00140 | 97.91881 | 1.87970 |
| 10.320 | 25.329 | -.03271 | 124.96118 | .65676 | .06234 | -.00592 | -.00329 | -.00187 | .00007 | 97.91291 | 1.68079 |
| 10.320 | 30.469 | -.03470 | 124.91310 | .89419 | .06262 | -.01687 | -.00372 | -.00198 | -.00168 | 97.91881 | 1.45639 |
| 10.320 | 35.631 | -.03949 | 124.93209 | 1.14875 | .06187 | -.03410 | -.00441 | -.00223 | -.00312 | 98.00843 | 1.24758 |
| | GRADIENT | -.00009 | -.03721 | .01471 | -.00204 | .00169 | -.00008 | .00010 | -.00028 | .00395 | .13825 |

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TABULATED SOURCE DATA - QA82

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QA82 CFMT113 MODEL 32-O CRB W/N79 (AIR)

(RMLO55) (03 SEP 74)

REFERENCE DATA

SREF = 2890.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 125.000
 PCRCs = 261.000 TCRCs = 80.000
 T/QA = 98.000 RN/L = .850

RUN NO. 86/ 0 RN/L = .80 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.409 | -.01313 | 125.01654 | -.20630 | .10276 | -.03708 | -.00169 | -.00386 | .01340 | 260.84019 | -1.38213 |
| 10.320 | -6.411 | -.01823 | 125.08837 | -.16098 | .09084 | -.03058 | -.00186 | -.00302 | .01175 | 260.72430 | -1.38412 |
| 10.320 | -3.192 | -.01888 | 125.19043 | -.11313 | .08097 | -.02646 | -.00200 | -.00297 | .01016 | 260.62452 | -1.24450 |
| 10.320 | -.174 | -.01989 | 125.17383 | -.07193 | .07245 | -.02082 | -.00247 | -.00258 | .00756 | 260.67606 | -.98689 |
| 10.320 | 2.831 | -.02080 | 125.21498 | -.02674 | .06760 | -.01520 | -.00275 | -.00240 | .00623 | 260.67606 | -.45393 |
| 10.320 | 5.871 | -.02283 | 125.15525 | .02326 | .06290 | -.00898 | -.00310 | -.00222 | .00606 | 260.79192 | .25727 |
| 10.320 | 8.803 | -.02576 | 125.22434 | .08309 | .05973 | -.00404 | -.00342 | -.00200 | .00585 | 260.60844 | 1.01713 |
| 10.320 | 12.018 | -.03176 | 125.15497 | .15693 | .05302 | .00178 | -.00389 | -.00185 | .00462 | 260.64060 | 1.64213 |
| 10.320 | 15.044 | -.03690 | 125.23371 | .24798 | .05624 | .00308 | -.00533 | -.00194 | .00576 | 260.60844 | 1.89497 |
| 10.320 | 20.323 | -.04260 | 125.24613 | .43671 | .05726 | .00585 | -.00589 | -.00213 | .00510 | 260.52475 | 1.89725 |
| 10.320 | 25.369 | -.04764 | 125.20505 | .64237 | .05851 | .00259 | -.00649 | -.00242 | .00400 | 260.60844 | 1.69271 |
| 10.320 | 30.445 | -.05229 | 125.23389 | .87442 | .05832 | -.00812 | -.00677 | -.00266 | .00341 | 260.60844 | 1.46810 |
| 10.320 | 35.575 | -.05897 | 125.11682 | 1.12519 | .05720 | -.02473 | -.00748 | -.00290 | .00181 | 260.65667 | 1.25783 |
| | GRADIENT | -.00032 | .00407 | .01434 | -.00222 | .00187 | -.00012 | .00009 | -.00065 | .00856 | .13123 |

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QAS2 CPMT113 MODEL 32-O ORB W/N79

(AIR)

(RMLOS6) (05 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125,000
 PCRC5 = 475,000 TCRC5 = 60,000
 T/QA = 174,000 RN/L = .850

RUN NO. 87/ 0 RN/L = .81 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.366 | -.01096 | 125.24308 | -.22132 | .09487 | -.02569 | -.00459 | -.00469 | .02248 | 475.11229 | -1.56548 |
| 10.320 | -6.359 | -.01969 | 125.16921 | -.17573 | .08314 | -.02147 | -.00470 | -.00267 | .01871 | 472.89051 | -1.62056 |
| 10.320 | -3.394 | -.01576 | 125.21437 | -.12827 | .07379 | -.01909 | -.00434 | -.00368 | .01474 | 472.91551 | -1.52197 |
| 10.320 | -.144 | -.01425 | 125.25361 | -.08294 | .06605 | -.01372 | -.00416 | -.00382 | .00989 | 472.91986 | -1.24925 |
| 10.320 | 2.864 | -.01799 | 125.38165 | -.04028 | .06054 | -.00676 | -.00454 | -.00369 | .00879 | 472.77745 | -.73997 |
| 10.320 | 5.945 | -.02200 | 125.39892 | .01232 | .05642 | .00003 | -.00513 | -.00339 | .00889 | 472.77312 | .11170 |
| 10.320 | 8.873 | -.02689 | 125.27567 | .07416 | .05280 | .00358 | -.00533 | -.00302 | .00922 | 472.97422 | 1.02395 |
| 10.320 | 12.068 | -.03398 | 125.40701 | .15011 | .05006 | .00789 | -.00644 | -.00286 | .00894 | 472.80246 | 1.69651 |
| 10.320 | 15.178 | -.03992 | 125.47091 | .24347 | .05051 | .01002 | -.00748 | -.00288 | .00957 | 472.85682 | 1.97122 |
| 10.320 | 20.238 | -.05104 | 125.43774 | .41906 | .05084 | .01420 | -.00869 | -.00301 | .00965 | 472.68943 | 1.94960 |
| 10.320 | 25.419 | -.06088 | 125.31203 | .63083 | .05253 | .01184 | -.00948 | -.00334 | .00906 | 472.77745 | 1.71961 |
| 10.320 | 30.572 | -.06884 | 125.30643 | .86837 | .05253 | .00167 | -.01010 | -.00369 | .00817 | 472.89051 | 1.48067 |
| 10.320 | 35.574 | -.07849 | 125.46597 | 1.10686 | .05166 | -.01396 | -.01069 | -.00414 | .00700 | 472.91551 | 1.26869 |
| | GRADIENT | -.00035 | .02653 | .01406 | -.00212 | .00197 | -.00003 | .00003 | -.00096 | -.02175 | .12441 |

DATE 31 OCT 74

TABULATED SOURCE DATA - OA82

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OA82 CFHT113 MODEL 32-O ORB W/N79 (AIR)

(RMLOS7) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREP = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 129.000
 PCRC5 = 702.000 TCRC5 = 84.000
 T/QA = 258.000 RN/L = .850

RUN NO. 88/ 0 RN/L = .81 GRADIENT INTERVAL = -3.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.376 | -.00911 | 125.26337 | -.23892 | .06791 | -.01212 | -.00786 | -.00442 | .02951 | 703.52556 | -1.76206 |
| 10.320 | -6.147 | -.01384 | 125.37069 | -.18883 | .07403 | -.00903 | -.00862 | -.00340 | .02167 | 703.05948 | -1.91637 |
| 10.320 | -3.133 | -.01044 | 125.30190 | -.14161 | .06624 | -.00780 | -.00813 | -.00478 | .01806 | 703.06326 | -1.86479 |
| 10.320 | -.088 | -.01328 | 125.45132 | -.10035 | .05946 | -.00262 | -.00779 | -.00464 | .01266 | 702.72468 | -1.88523 |
| 10.320 | 3.072 | -.01676 | 125.42092 | -.05239 | .05425 | .00444 | -.00773 | -.00455 | .01217 | 702.72468 | -1.07506 |
| 10.320 | 5.921 | -.02092 | 125.27118 | -.00143 | .05035 | .00944 | -.00767 | -.00455 | .01239 | 702.68843 | -.13259 |
| 10.320 | 8.928 | -.02816 | 125.27573 | .06268 | .04711 | .01288 | -.00794 | -.00432 | .01299 | 702.89584 | .97027 |
| 10.320 | 12.097 | -.03520 | 125.29156 | .14160 | .04395 | .01555 | -.00682 | -.00422 | .01336 | 702.72842 | 1.77908 |
| 10.320 | 15.154 | -.04360 | 125.30258 | .23324 | .04433 | .01800 | -.00981 | -.00401 | .01346 | 702.68843 | 2.05794 |
| 10.320 | 20.210 | -.05688 | 125.39830 | .40823 | .04537 | .02175 | -.01090 | -.00428 | .01417 | 702.64098 | 2.00120 |
| 10.320 | 25.154 | -.06873 | 125.31288 | .60769 | .04729 | .02143 | -.01200 | -.00462 | .01377 | 702.64098 | 1.76003 |
| 10.320 | 30.298 | -.08199 | 125.46115 | .83757 | .04732 | .01282 | -.01285 | -.00489 | .01265 | 702.51358 | 1.50904 |
| 10.320 | 35.521 | -.09189 | 125.43104 | 1.09084 | .04707 | -.00361 | -.01344 | -.00520 | .01034 | 702.55728 | 1.28030 |
| | GRADIENT | -.00102 | .01900 | .01438 | -.00193 | .00197 | .00006 | .00004 | -.00062 | -.05421 | .12764 |

QAB2 CFHT113 MODEL 32-Q ORB W/N83 (ATR)

(RMLO56) (03 SEP 74)

REFERENCE DATA

BREF = 2690,0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375,0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125,000
 PCRC8 = 100,000 TCRC8 = 79,000
 T/QA = 36,000 RN/L = .850

RUN NO. 89/ 0 RN/L = .80 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC8 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.332 | -.01927 | 124.74028 | -.20068 | .10273 | -.03810 | -.00115 | -.00413 | .01223 | 100.18488 | -1.35417 |
| 10.320 | -6.274 | -.02063 | 124.83397 | -.15646 | .09026 | -.03140 | -.00140 | -.00304 | .01185 | 99.63799 | -1.36354 |
| 10.320 | -3.203 | -.01833 | 124.77055 | -.10727 | .08062 | -.02619 | -.00143 | -.00330 | .00904 | 100.10117 | -1.18634 |
| 10.320 | -.173 | -.02018 | 124.71652 | -.06642 | .07313 | -.02172 | -.00221 | -.00270 | .00700 | 100.01746 | -.90277 |
| 10.320 | 2.834 | -.02074 | 124.74028 | -.02281 | .06773 | -.01548 | -.00255 | -.00271 | .00654 | 99.93375 | -.38980 |
| 10.320 | 5.940 | -.02323 | 124.74401 | .02793 | .06292 | -.00862 | -.00275 | -.00265 | .00653 | 99.89004 | .32491 |
| 10.320 | 8.911 | -.02566 | 124.74057 | .08889 | .06038 | -.00295 | -.00318 | -.00274 | .00678 | 99.93978 | 1.06863 |
| 10.320 | 12.148 | -.03102 | 124.74953 | .16468 | .05619 | .00208 | -.00401 | -.00238 | .00623 | 99.76031 | 1.66505 |
| 10.320 | 15.073 | -.03342 | 124.78707 | .25499 | .05708 | .00318 | -.00463 | -.00250 | .00625 | 99.85004 | 1.90528 |
| 10.320 | 20.107 | -.03623 | 124.90801 | .43199 | .05728 | .00471 | -.00484 | -.00274 | .00542 | 99.91567 | 1.90800 |
| 10.320 | 25.274 | -.04079 | 124.90801 | .64162 | .05815 | .00103 | -.00540 | -.00313 | .00473 | 99.83197 | 1.70086 |
| 10.320 | 30.403 | -.04682 | 124.90633 | .87824 | .05812 | -.00955 | -.00590 | -.00333 | .00379 | 99.83197 | 1.47207 |
| 10.320 | 35.427 | -.05087 | 124.76233 | 1.12620 | .05724 | -.02635 | -.00651 | -.00377 | .00277 | 99.83607 | 1.26454 |
| | GRADIENT | -.00040 | -.00503 | .01402 | -.00214 | .00211 | -.00019 | .00010 | -.00041 | -.02773 | .13189 |

DATE 31 OCT 74

TABULATED SOURCE DATA - OA82

PAGE 03

OA82 CFHT113 MODEL 32-0 CRD W/N83 (AIR)

(RHLOS9) (03 SEP 74)

REFERENCE DATA

BREF = 2090.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.5100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = 266.000 TCRC5 = 80.000
 T/QA = 96.000 RN/L = .850

RUN NO. 90/ 0 RN/L = .80 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.399 | -.00990 | 124.72355 | -.23056 | .09035 | -.01066 | -.00926 | -.00666 | .02636 | 265.47908 | -1.68064 |
| 10.320 | -6.331 | -.01381 | 124.65865 | -.18044 | .07865 | -.01336 | -.00532 | -.00476 | .02332 | 265.64648 | -1.73662 |
| 10.320 | -3.319 | -.00999 | 124.70310 | -.13319 | .06867 | -.01166 | -.00497 | -.00804 | .01925 | 265.59556 | -1.68621 |
| 10.320 | -.199 | -.01072 | 124.66259 | -.08925 | .06178 | -.00574 | -.00493 | -.00593 | .01441 | 265.44633 | -1.43619 |
| 10.320 | 3.046 | -.01303 | 124.75183 | -.04286 | .05610 | .00109 | -.00312 | -.00371 | .01308 | 265.61195 | -.85187 |
| 10.320 | 6.037 | -.01685 | 124.87701 | .00897 | .05221 | .00767 | -.00499 | -.00350 | .01328 | 265.73018 | .06497 |
| 10.320 | 9.049 | -.02198 | 124.80969 | .07350 | .04890 | .01103 | -.00329 | -.00328 | .01374 | 265.57917 | 1.08423 |
| 10.320 | 12.132 | -.02727 | 124.89036 | .14708 | .04572 | .01416 | -.00666 | -.00331 | .01399 | 265.76296 | 1.77485 |
| 10.320 | 15.249 | -.03513 | 124.97820 | .23680 | .04593 | .01797 | -.00757 | -.00320 | .01455 | 265.89758 | 2.03805 |
| 10.320 | 20.181 | -.04714 | 124.96326 | .41021 | .04730 | .02235 | -.00918 | -.00331 | .01510 | 265.47908 | 1.98325 |
| 10.320 | 25.382 | -.05782 | 124.86319 | .62036 | .04861 | .02063 | -.01032 | -.00399 | .01495 | 265.51195 | 1.74173 |
| 10.320 | 30.272 | -.06768 | 124.93173 | .84257 | .04877 | .01130 | -.01098 | -.00644 | .01464 | 265.64648 | 1.50691 |
| 10.320 | 35.495 | -.07465 | 125.00177 | 1.09647 | .04798 | -.00622 | -.01128 | -.00697 | .01337 | 265.37901 | 1.28160 |
| | GRADIENT | -.00048 | .00756 | .01419 | -.00201 | .00201 | -.00002 | .00005 | -.00097 | .00269 | .13120 |

QA82 CFHT113 MODEL 32-Q CRB W/N83

(AIR)

(RHLO80) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 125.000
 PCRC5 = 482.000 TCRC5 = 84.000
 T/QA = 174.000 RN/L = .850

RUN NO. 91/ 0 RN/L = .81 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|--------|---------|---------|---------|-----------|----------|
| 10.320 | -9.354 | .00440 | 124.97710 | -.23978 | .07504 | .00883 | -.01041 | -.00601 | .03914 | 481.81209 | -2.09971 |
| 10.320 | -6.203 | .00431 | 124.96641 | -.20868 | .06197 | .01137 | -.01074 | -.00829 | .03240 | 481.59090 | -2.38548 |
| 10.320 | -3.195 | .00567 | 124.90335 | -.16386 | .05388 | .01287 | -.01071 | -.00942 | .02664 | 481.63069 | -2.55203 |
| 10.320 | -.144 | .00098 | 124.99752 | -.12185 | .04771 | .01722 | -.00992 | -.00924 | .02345 | 482.09310 | -2.53106 |
| 10.320 | 2.905 | -.00471 | 125.01221 | -.07437 | .04290 | .02365 | -.00959 | -.00912 | .02263 | 481.42945 | -1.93630 |
| 10.320 | 5.944 | -.00821 | 125.01370 | -.02072 | .03816 | .02875 | -.00869 | -.00923 | .02283 | 481.84802 | -.68579 |
| 10.320 | 8.909 | -.01645 | 125.07269 | .04401 | .03499 | .03117 | -.00896 | -.00911 | .02358 | 482.29043 | .91979 |
| 10.320 | 12.071 | -.02520 | 125.19397 | .12586 | .03263 | .03257 | -.00967 | -.00901 | .02397 | 481.33980 | 1.99641 |
| 10.320 | 15.208 | -.03355 | 125.14002 | .21899 | .03258 | .03451 | -.01045 | -.00900 | .02489 | 481.14843 | 2.28121 |
| 10.320 | 20.326 | -.04876 | 125.31070 | .39558 | .03472 | .04056 | -.01240 | -.00924 | .02515 | 481.67480 | 2.11144 |
| 10.320 | 25.332 | -.06481 | 125.17178 | .59115 | .03554 | .04072 | -.01383 | -.00979 | .02544 | 481.73440 | 1.82106 |
| 10.320 | 30.903 | -.08048 | 125.22055 | .82500 | .03663 | .03215 | -.01486 | -.01032 | .02522 | 482.20673 | 1.53722 |
| 10.320 | 35.468 | -.09506 | 125.21812 | 1.06728 | .03665 | .01725 | -.01586 | -.01072 | .02343 | 482.82263 | 1.30628 |
| | GRADIENT | -.00170 | .01785 | .01467 | -.00180 | .00177 | .00018 | .00005 | -.00066 | -.03625 | .09765 |

DATE 31 OCT 74

TABULATED SOURCE DATA - Q482

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Q482 CFHT113 MODEL 32-0 CRB W/N63 (AIR)

(RHLO61) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRS = 652.000 TCRC = 67.000
 T/QA = 238.000 RN/L = .650

RUN NO. 92/ 0 RN/L = .62 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CSL | CYN | CY | PCRS | L/D |
|--------|----------|---------|-----------|---------|---------|--------|---------|---------|---------|-----------|----------|
| 10.320 | -9.222 | .01839 | 125.22068 | -.27902 | .06241 | .02963 | -.01446 | -.01019 | .04707 | 652.54309 | -2.49636 |
| 10.320 | -8.141 | .01900 | 125.41914 | -.22950 | .05035 | .03011 | -.01439 | -.01167 | .03992 | 652.08136 | -2.98620 |
| 10.320 | -3.075 | .01629 | 125.55591 | -.18300 | .04318 | .03040 | -.01434 | -.01214 | .03328 | 649.86995 | -3.40810 |
| 10.320 | -.048 | .00734 | 125.63774 | -.14349 | .03711 | .03477 | -.01340 | -.01186 | .03111 | 651.66806 | -3.85396 |
| 10.320 | 2.918 | .00345 | 125.72530 | -.09718 | .03266 | .04103 | -.01284 | -.01206 | .03099 | 651.25226 | -3.56741 |
| 10.320 | 5.971 | -.00203 | 125.76273 | -.04184 | .02793 | .04582 | -.01188 | -.01219 | .03127 | 651.46014 | -1.89993 |
| 10.320 | 8.929 | -.01055 | 125.87888 | .02271 | .02478 | .04753 | -.01173 | -.01203 | .03130 | 650.32886 | .66386 |
| 10.320 | 12.076 | -.02102 | 125.91775 | .10806 | .02311 | .04752 | -.01211 | -.01192 | .03170 | 651.75175 | 2.23072 |
| 10.320 | 15.179 | -.02995 | 125.96965 | .20245 | .02335 | .04817 | -.01216 | -.01192 | .03233 | 653.13403 | 2.50361 |
| 10.320 | 20.240 | -.04754 | 125.93402 | .38084 | .02584 | .05288 | -.01416 | -.01215 | .03314 | 652.75363 | 2.23326 |
| 10.320 | 25.355 | -.06700 | 125.93439 | .57796 | .02684 | .05480 | -.01617 | -.01281 | .03337 | 652.08396 | 1.87960 |
| 10.320 | 30.678 | -.08676 | 125.97430 | .81513 | .02857 | .04736 | -.01728 | -.01354 | .03397 | 653.59073 | 1.56571 |
| 10.320 | 35.877 | -.10432 | 126.08788 | 1.05596 | .02695 | .03218 | -.01837 | -.01392 | .03210 | 651.83545 | 1.32036 |
| | GRADIENT | -.00215 | .02827 | .01432 | -.00176 | .00177 | .00025 | .00001 | -.00038 | .23210 | -.02703 |

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OA82 CFHT113 MODEL 32-O CRB W/N84

(AIR)

(RHL082) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = 110.000 TCRC5 = 77.000
 T/OA = 36.000 RN/L = .650

RUN NO. 93/ 0 RN/L = .81 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/O |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.490 | -.03786 | 125.20756 | -.20778 | .10272 | -.04430 | .00105 | .00395 | -.02369 | 109.96562 | -1.38875 |
| 10.320 | -6.155 | -.04729 | 125.22438 | -.16027 | .08892 | -.03937 | -.00255 | .00822 | -.03224 | 110.05598 | -1.41871 |
| 10.320 | -3.324 | -.06338 | 125.17530 | -.11783 | .08028 | -.03934 | -.00432 | .01121 | -.02762 | 109.97228 | -1.29889 |
| 10.320 | -.235 | -.06764 | 125.16793 | -.07644 | .07405 | -.03336 | -.00478 | .01146 | -.02470 | 109.98559 | -1.02361 |
| 10.320 | 2.757 | -.06468 | 125.31553 | -.03684 | .06927 | -.02547 | -.00493 | .01024 | -.02211 | 109.87527 | -.59523 |
| 10.320 | 6.000 | -.06139 | 125.40527 | .01951 | .06458 | -.01700 | -.00454 | .00818 | -.01776 | 109.87527 | .19098 |
| 10.320 | 8.995 | -.04750 | 125.39062 | .08311 | .06121 | -.01034 | -.00141 | .00593 | -.01693 | 109.88192 | .98725 |
| 10.320 | 11.993 | -.03385 | 125.24343 | .16291 | .05960 | -.00888 | .00058 | .00314 | -.01397 | 109.98559 | 1.59493 |
| 10.320 | 15.090 | -.02661 | 125.38798 | .24999 | .05897 | -.00571 | .00199 | .00211 | -.01356 | 109.95896 | 1.85239 |
| 10.320 | 20.172 | -.01482 | 125.24105 | .43696 | .06166 | -.00274 | .00259 | .00111 | -.01376 | 110.06265 | 1.86472 |
| 10.320 | 25.120 | -.00860 | 125.37624 | .64110 | .05872 | -.00590 | .00248 | .00031 | -.01476 | 109.95896 | 1.70770 |
| | GRADIENT | -.00022 | .02292 | .01332 | -.00181 | .00228 | -.00010 | -.00016 | .00091 | -.01584 | .11557 |

DATE 08 OCT 74

TABULATED SOURCE DATA - QA02

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QA02 CFHT113 MODEL 32-0 CRB W/N84

(AIR)

(RHLO63) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.6100 IN. YMRP = .0000 IN.
 BREF = 938.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = 272.000 TCRC5 = 79.000
 T/QA = 96.000 RN/L = .850

RUN NO. 94/ 0 RN/L = .82 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|--------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.469 | -.08724 | 125.57036 | -.21912 | .09336 | -.03943 | -.00712 | .01849 | -.08433 | 271.65607 | -1.56696 |
| 10.320 | -6.244 | -.09211 | 125.51473 | -.17447 | .08283 | -.03719 | -.01054 | .02421 | -.06364 | 272.14172 | -1.62282 |
| 10.320 | -3.203 | -.09731 | 125.69242 | -.13224 | .07678 | -.03534 | -.01108 | .02324 | -.05507 | 271.84024 | -1.51981 |
| 10.320 | -.318 | -.08677 | 125.58157 | -.10050 | .06972 | -.03093 | -.00884 | .01784 | -.03981 | 271.62267 | -1.42444 |
| 10.320 | 2.683 | -.07215 | 125.75340 | -.06458 | .06577 | -.02480 | -.00567 | .01227 | -.02693 | 271.65607 | -1.07755 |
| 10.320 | 5.940 | -.05366 | 125.64556 | -.00530 | .06277 | -.02042 | -.00254 | .00690 | -.01575 | 271.79009 | -.19023 |
| 10.320 | 8.995 | -.04647 | 125.68754 | .06014 | .05836 | -.01128 | -.00050 | .00592 | -.01716 | 271.52220 | .74995 |
| 10.320 | 12.019 | -.04306 | 125.63229 | .13955 | .05625 | -.00747 | .00001 | .00358 | -.01872 | 271.72315 | 1.49408 |
| 10.320 | 15.093 | -.03214 | 125.67073 | .22954 | .05621 | -.00323 | .00213 | .00484 | -.01958 | 271.72315 | 1.81501 |
| 10.320 | 20.148 | -.01602 | 125.89485 | .41280 | .05878 | .00042 | .00420 | .00413 | -.02323 | 271.32129 | 1.86086 |
| 10.320 | 25.333 | -.00850 | 125.84547 | .62820 | .06022 | -.00176 | .00444 | .00408 | -.02539 | 271.40499 | 1.67694 |
| 10.320 | 30.229 | -.00228 | 125.86463 | .85475 | .06087 | -.01052 | .00484 | .00439 | -.02617 | 271.68960 | 1.46592 |
| 10.320 | 35.385 | .00364 | 125.81593 | 1.10994 | .06123 | -.02855 | .00445 | .00436 | -.02803 | 271.62267 | 1.25524 |
| GRADIENT | | .00433 | .01066 | .01154 | -.00187 | .00180 | .00092 | -.00187 | .00479 | -.03116 | .07562 |

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QAB2 CFHT113 MODEL 32-O ORB W/N84

(AIR)

(RHL084) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6600 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 125.000
 PCRC5 = 490.000 TCRC5 = 86.000
 T/QA = 174.000 RN/L = .650

RUN NO. 95/ 0 RN/L = .83 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.320 | -9.371 | -.11594 | 125.92773 | -.24422 | .08569 | -.02493 | -.01456 | .03722 | -.10482 | 489.84673 | -1.82286 |
| 10.320 | -6.386 | -.13311 | 126.02152 | -.19538 | .07896 | -.02836 | -.01455 | .03746 | -.09093 | 489.20754 | -1.85007 |
| 10.320 | -3.396 | -.11815 | 126.09893 | -.13033 | .07314 | -.02732 | -.01174 | .02947 | -.08967 | 489.26067 | -1.77693 |
| 10.320 | -.308 | -.09187 | 126.17554 | -.11244 | .06566 | -.02379 | -.00784 | .01985 | -.04860 | 489.20754 | -1.89144 |
| 10.320 | 2.703 | -.08963 | 126.10335 | -.07432 | .06167 | -.02021 | -.00394 | .01310 | -.03205 | 489.54901 | -1.32767 |
| 10.320 | 5.997 | -.08221 | 126.20000 | -.02932 | .06022 | -.02048 | -.00346 | .01022 | -.02561 | 489.41277 | -.82755 |
| 10.320 | 9.021 | -.06154 | 126.20906 | .03482 | .05793 | -.01587 | -.00286 | .00912 | -.01966 | 489.60313 | .40387 |
| 10.320 | 12.088 | -.05968 | 126.28752 | .11707 | .05420 | -.00433 | -.00027 | .01076 | -.02828 | 489.51942 | 1.33042 |
| 10.320 | 15.002 | -.05406 | 126.37478 | .20506 | .05368 | -.00372 | .00009 | .00957 | -.02792 | 489.57273 | 1.75143 |
| 10.320 | 20.304 | -.02232 | 126.40171 | .39934 | .05604 | .00422 | .00549 | .00818 | -.03366 | 489.51942 | 1.63782 |
| 10.320 | 25.275 | -.00805 | 126.41869 | .60209 | .05728 | .00397 | .00663 | .00843 | -.03832 | 489.66393 | 1.68350 |
| 10.320 | 30.486 | -.00066 | 126.56478 | .84589 | .05832 | -.00568 | .00673 | .00892 | -.03958 | 489.29124 | 1.45917 |
| 10.320 | 35.364 | .00346 | 126.63824 | 1.09050 | .05873 | -.02268 | .00593 | .00904 | -.04180 | 489.48903 | 1.25956 |
| | GRADIENT | .00760 | .00082 | .01246 | -.00180 | .00117 | .00128 | -.00269 | .00617 | .04711 | .07377 |

QAB2 CFHT113 MODEL 32-O ORB W/N49 (MIXED GAS)

(RHL000) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6600 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = 158.000 TCRC5 = 85.000
 T/QA = 47.500 PCTHE = 90.000
 PCTAR = 10.000 RN/L = 1.000

RUN NO. 86/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -10.384 | -.01074 | 149.27589 | -.20420 | .10083 | -.04214 | -.00045 | -.00367 | .00631 | 158.91033 | -1.34333 |
| 10.330 | -5.374 | -.01483 | 149.15523 | -.13588 | .08581 | -.03002 | -.00131 | -.00291 | .00840 | 159.27430 | -1.29632 |
| 10.330 | -.282 | -.01801 | 149.33623 | -.08707 | .07099 | -.02206 | -.00214 | -.00237 | .00630 | 158.88119 | -.93546 |
| 10.330 | 4.916 | -.02077 | 149.40427 | .01070 | .06255 | -.01161 | -.00258 | -.00236 | .00594 | 158.31483 | .06389 |
| 10.330 | 10.052 | -.02585 | 149.47532 | .10808 | .05655 | -.00002 | -.00346 | -.00245 | .00635 | 158.22147 | 1.29520 |
| 10.330 | 15.061 | -.03514 | 149.39934 | .24763 | .05428 | .00295 | -.00466 | -.00227 | .00615 | 158.33419 | 1.92724 |
| 10.330 | 20.297 | -.03945 | 149.31658 | .43556 | .05551 | .00353 | -.00495 | -.00236 | .00478 | 158.09277 | 1.91606 |
| 10.330 | 25.371 | -.04507 | 149.41526 | .64287 | .05683 | -.00027 | -.00531 | -.00275 | .00412 | 158.15713 | 1.70287 |
| 10.330 | 30.621 | -.04981 | 149.33951 | .87697 | .05644 | -.01184 | -.00578 | -.00297 | .00308 | 158.09277 | 1.46577 |
| 10.330 | 35.576 | -.05703 | 149.50438 | 1.11219 | .05507 | -.02758 | -.00650 | -.00337 | .00215 | 158.08310 | 1.26122 |
| | GRADIENT | -.00053 | .01309 | .01496 | -.00162 | .00201 | -.00008 | .00000 | -.00007 | -.10896 | .19610 |

QAS2 CFMT113 MODEL 32-O CRB W/N52 (MIXED GAS)

(RHLMO1) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = 150.000 TCRC5 = 69.000
 T/QA = 47.500 PCTHE = 90.000
 PCTAR = 10.000 RN/L = 1.000

RUN NO. 67/ 0 RN/L = .90 GRADIENT INTERVAL = -3.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|--------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -10.461 | -.03090 | 148.91421 | -.20214 | .10988 | -.01824 | .00020 | .00130 | -.00611 | 150.01346 | -1.27008 |
| 10.330 | -8.406 | -.02630 | 148.90924 | -.13220 | .06239 | -.02732 | -.00128 | .00312 | -.00674 | 150.92004 | -1.17618 |
| 10.330 | -7.318 | -.04613 | 148.99129 | -.08938 | .07236 | -.03342 | -.00301 | .00580 | -.01540 | 150.91127 | -.81197 |
| 10.330 | 5.014 | -.07186 | 148.94391 | .02021 | .06771 | -.02072 | -.00627 | .00976 | -.02107 | 150.35359 | .20344 |
| 10.330 | 9.991 | -.05439 | 149.00614 | .11889 | .06096 | -.01306 | -.00403 | .00560 | -.01436 | 150.34397 | 1.31699 |
| 10.330 | 19.028 | -.03144 | 149.15836 | .26985 | .06159 | -.01166 | -.00143 | .00115 | -.00670 | 150.13779 | 1.86991 |
| 10.330 | 20.187 | -.03735 | 149.21813 | .45069 | .06234 | -.00979 | -.00230 | .00179 | -.00937 | 150.23114 | 1.07980 |
| 10.330 | 25.228 | -.04281 | 149.14741 | .65844 | .06393 | -.01308 | -.00267 | .00220 | -.01176 | 150.15713 | 1.66157 |
| 10.330 | 30.593 | -.04009 | 149.08681 | .90933 | .06393 | -.02627 | -.00262 | .00145 | -.01187 | 150.07344 | 1.44876 |
| 10.330 | 35.568 | -.02643 | 149.07982 | 1.14949 | .04921 | -.04235 | -.00236 | -.00147 | -.01131 | 150.14746 | 1.27913 |
| | GRADIENT | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |

QAS2 CFMT113 MODEL 32-O CRB W/N53 (MIXED GAS)

(RHLMO2) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = 100.000 TCRC5 = 65.000
 T/QA = 47.500 PCTHE = 90.000
 PCTAR = 10.000 RN/L = 1.000

RUN NO. 68/ 0 RN/L = .97 GRADIENT INTERVAL = -3.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -10.402 | -.02129 | 148.80634 | -.20024 | .10835 | -.05123 | .00063 | -.00158 | .00026 | 160.26895 | -1.24287 |
| 10.330 | -9.370 | -.02462 | 148.73110 | -.13767 | .09163 | -.03767 | -.00084 | -.00175 | .01117 | 160.09176 | -1.23410 |
| 10.330 | -7.241 | -.01836 | 148.98903 | -.05774 | .07750 | -.03111 | -.00018 | -.00228 | .00406 | 160.31343 | -.73842 |
| 10.330 | 4.855 | -.01686 | 148.89345 | .02122 | .06892 | -.02030 | -.00039 | -.00216 | .00298 | 160.10155 | .21722 |
| 10.330 | 10.022 | -.02104 | 148.95777 | .11776 | .06280 | -.00973 | -.00213 | -.00299 | .00758 | 160.08197 | 1.27565 |
| 10.330 | 15.058 | -.02873 | 149.10533 | .26282 | .06041 | -.00463 | -.00307 | -.00240 | .00527 | 160.07219 | 1.88050 |
| 10.330 | 20.228 | -.03839 | 149.10983 | .44694 | .06106 | -.00254 | -.00404 | -.00187 | .00299 | 159.98850 | 1.88014 |
| 10.330 | 25.341 | -.04266 | 148.97508 | .66314 | .06252 | -.00800 | -.00450 | -.00176 | .00098 | 160.01785 | 1.68243 |
| 10.330 | 30.633 | -.04984 | 148.93436 | .90589 | .06331 | -.02043 | -.00519 | -.00181 | -.00045 | 160.16525 | 1.44781 |
| 10.330 | 35.611 | -.05715 | 149.08770 | 1.14970 | .06274 | -.03807 | -.00608 | -.00226 | -.00144 | 159.98850 | 1.24666 |
| | GRADIENT | .00029 | -.01836 | .01549 | -.00168 | .00212 | -.00004 | .00002 | -.00021 | -.04158 | .18753 |

QAB2 CFHT113 MODEL 32-O ORB W/N89 (MIXED GAS)

(RHLMD3) (03 SEP 74)

REFERENCE DATA

BREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 150.000
 PCRC5 = 160.000 TCRC5 = 65.000
 T/QA = 47.500 PCTHE = .000
 PCTAR = 100.000 RN/L = 1.000

RUN NO. 70/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|---------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -10.503 | -.01750 | 149.31037 | -.20388 | .10731 | -.05002 | .00081 | -.00252 | .00347 | 159.94394 | -1.26787 |
| 10.330 | -5.249 | -.02599 | 149.36827 | -.13949 | .08892 | -.03831 | -.00081 | -.00223 | .01442 | 159.99628 | -1.29087 |
| 10.330 | -.265 | -.01100 | 149.28711 | -.06951 | .07571 | -.03348 | .00045 | -.00438 | .00899 | 160.09176 | -.90969 |
| 10.330 | 4.800 | -.01289 | 149.36059 | .00981 | .06694 | -.01934 | -.00034 | -.00388 | .00808 | 159.93415 | .05895 |
| 10.330 | 10.087 | -.02081 | 149.41533 | .10732 | .05821 | -.00783 | -.00113 | -.00290 | .00687 | 160.01785 | 1.25431 |
| 10.330 | 15.133 | -.03147 | 149.41988 | .25840 | .05909 | -.00490 | -.00317 | -.00281 | .00761 | 159.93415 | 1.87967 |
| 10.330 | 20.292 | -.04039 | 149.37154 | .44010 | .05989 | -.00151 | -.00466 | -.00215 | .00471 | 159.94394 | 1.87749 |
| 10.330 | 25.388 | -.04699 | 149.40386 | .63229 | .06150 | -.00816 | -.00535 | -.00231 | .00356 | 159.86023 | 1.87939 |
| 10.330 | 30.559 | -.05269 | 149.40895 | .89020 | .06220 | -.01829 | -.00580 | -.00236 | .00235 | 159.86023 | 1.45198 |
| 10.330 | 35.487 | -.06179 | 149.46433 | 1.13057 | .06167 | -.03497 | -.00678 | -.00263 | .00031 | 159.92437 | 1.25316 |
| GRADIENT | | -.00037 | .01451 | .01562 | -.00173 | .00279 | -.00015 | .00009 | -.00018 | -.03112 | .19124 |

QAB2 CFHT113 MODEL 32-O ORB W/N49 (MIXED GAS)

(RHLMD4) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSP) = 150.000
 PCRC5 = 158.000 TCRC5 = 79.000
 T/QA = 47.500 PCTHE = .000
 PCTAR = 100.000 RN/L = 1.000

RUN NO. 71/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSP) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|---------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -10.298 | -.00905 | 149.32041 | -.20580 | .10221 | -.04231 | -.00067 | -.00408 | .00688 | 158.26984 | -1.34009 |
| 10.330 | -5.196 | -.01852 | 149.37743 | -.13642 | .08598 | -.03048 | -.00156 | -.00296 | .00934 | 158.19581 | -1.30710 |
| 10.330 | -.224 | -.01903 | 149.46190 | -.06855 | .07143 | -.02232 | -.00244 | -.00257 | .00671 | 158.10243 | -.95222 |
| 10.330 | 4.830 | -.02151 | 149.66901 | .00685 | .06259 | -.01138 | -.00305 | -.00236 | .00546 | 157.90606 | .02439 |
| 10.330 | 9.982 | -.02773 | 149.61780 | .10717 | .05605 | -.00086 | -.00381 | -.00231 | .00611 | 158.01873 | 1.29891 |
| 10.330 | 15.155 | -.03805 | 149.58881 | .25449 | .05438 | .00356 | -.00513 | -.00219 | .00578 | 158.11210 | 1.94467 |
| 10.330 | 20.329 | -.04349 | 149.72997 | .43998 | .05548 | .00329 | -.00558 | -.00238 | .00510 | 157.99941 | 1.91965 |
| 10.330 | 25.355 | -.04812 | 149.83061 | .64444 | .05628 | .00080 | -.00597 | -.00280 | .00455 | 157.81273 | 1.70961 |
| 10.330 | 30.532 | -.05392 | 149.78206 | .88469 | .05633 | -.01071 | -.00637 | -.00306 | .00352 | 157.90806 | 1.47283 |
| 10.330 | 35.528 | -.06160 | 149.85568 | 1.12744 | .05519 | -.02753 | -.00702 | -.00343 | .00224 | 157.83202 | 1.26484 |
| GRADIENT | | -.00049 | .04082 | .01486 | -.00174 | .00216 | -.00012 | .00004 | -.00025 | -.03870 | .19247 |

QA82 CPHT113 MODEL 32-O CRB W/N52 (MIXED GAS)

(RHLW05) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.8800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 130.000
 PCRC8 = 138.000 TCRC8 = 79.000
 T/QA = 47.500 PCTHE = .000
 PCTAR = 100.000 RN/L = 1.000

RUN NO. 72/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC8 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.330 | -10.518 | -.03687 | 149.27591 | -.20740 | .10480 | -.04844 | -.00012 | .00309 | -.01055 | 157.75797 | -1.31151 |
| 10.330 | -5.210 | -.04476 | 149.29475 | -.13349 | .09151 | -.03988 | -.00206 | .00331 | -.01372 | 157.98975 | -1.20662 |
| 10.330 | -.274 | -.06241 | 149.32451 | -.08378 | .07272 | -.03486 | -.00497 | .00925 | -.02188 | 157.92537 | -.86856 |
| 10.330 | 4.838 | -.07224 | 149.29911 | .00602 | .06667 | -.02139 | -.00627 | .01019 | -.02179 | 157.85132 | .00564 |
| 10.330 | 9.932 | -.04935 | 149.43984 | .10919 | .05935 | -.01159 | -.00328 | .00450 | -.01193 | 157.90806 | 1.25819 |
| 10.330 | 15.063 | -.03230 | 149.43425 | .26702 | .06054 | -.01208 | -.00150 | .00120 | -.00705 | 157.91571 | 1.89370 |
| 10.330 | 20.234 | -.03880 | 149.26872 | .45263 | .06208 | -.01003 | -.00239 | .00203 | -.01082 | 157.88097 | 1.87729 |
| 10.330 | 25.362 | -.04545 | 149.35282 | .66887 | .06375 | -.01348 | -.00312 | .00262 | -.01356 | 157.93503 | 1.67705 |
| 10.330 | 30.614 | -.04388 | 149.50360 | .91060 | .06312 | -.02394 | -.00316 | .00190 | -.01340 | 157.83202 | 1.45071 |
| 10.330 | 35.639 | -.03863 | 149.37715 | 1.18099 | .06282 | -.04383 | -.00293 | .00074 | -.01329 | 157.83202 | 1.24569 |
| | GRADIENT | -.00192 | -.00497 | .01385 | -.00118 | .00260 | -.00025 | .00018 | .00002 | -.01448 | .17101 |

QA82 CPHT113 MODEL 32-O CRB W/N52 (MIXED GAS)

(RHLW06) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.8800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 130.000
 PCRC8 = 138.000 TCRC8 = 80.000
 T/QA = 47.500 PCTHE = 85.000
 PCTAR = 15.000 RN/L = 1.000

RUN NO. 73/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC8 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.330 | -10.492 | -.03334 | 148.71812 | -.20635 | .10729 | -.05013 | .00015 | .00174 | -.00704 | 158.07344 | -1.28287 |
| 10.330 | -5.383 | -.04171 | 148.76914 | -.13642 | .09350 | -.03710 | -.00148 | .00373 | -.00980 | 157.98009 | -1.19979 |
| 10.330 | -.314 | -.05187 | 148.80310 | -.08073 | .07367 | -.03377 | -.00316 | .00608 | -.01564 | 158.17647 | -.81518 |
| 10.330 | 4.815 | -.07188 | 148.95246 | .01139 | .06853 | -.02157 | -.00617 | .00968 | -.02071 | 158.07344 | .08077 |
| 10.330 | 9.966 | -.05510 | 148.71809 | .11617 | .06164 | -.01279 | -.00378 | .00533 | -.01386 | 158.11210 | 1.28377 |
| 10.330 | 15.080 | -.03386 | 148.75039 | .27271 | .06185 | -.01187 | -.00143 | .00119 | -.00698 | 158.02639 | 1.89201 |
| 10.330 | 20.194 | -.03894 | 148.73586 | .45395 | .06280 | -.00982 | -.00228 | .00179 | -.00980 | 158.11210 | 1.87512 |
| 10.330 | 25.274 | -.04692 | 148.83363 | .66518 | .06404 | -.01327 | -.00303 | .00243 | -.01254 | 157.90606 | 1.67926 |
| 10.330 | 30.487 | -.03834 | 148.85014 | .91209 | .06403 | -.02605 | -.00258 | .00118 | -.01172 | 158.11210 | 1.45487 |
| 10.330 | 35.530 | -.03809 | 148.71977 | 1.18126 | .06319 | -.04412 | -.00279 | .00044 | -.01210 | 158.01873 | 1.23068 |
| | GRADIENT | -.00390 | .02912 | .01406 | -.00100 | .00238 | -.00039 | .00070 | -.00099 | -.02009 | .17468 |

QAB2 CFHT113 MODEL 32-O CRB W/N49 (MIXED GAS)

(RHLMO7) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = 158.000 TCRC5 = 80.000
 T/OA = 47.500 PCTHE = 85.000
 PCTAR = 15.000 RN/L = 1.000

RUN NO. 74/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|--------|-----------|----------|
| 10.330 | -10.227 | -.01226 | 148.54841 | -.20559 | .10492 | -.04450 | -.00016 | -.00374 | .00529 | 158.08639 | -1.31446 |
| 10.330 | -5.333 | -.01777 | 148.52046 | -.13879 | .08870 | -.03151 | -.00112 | -.00279 | .00783 | 158.11210 | -1.26377 |
| 10.330 | -.228 | -.01833 | 148.60882 | -.06556 | .07364 | -.02396 | -.00181 | -.00243 | .00537 | 158.13144 | -.88350 |
| 10.330 | 4.690 | -.02070 | 148.76611 | .01181 | .06490 | -.01275 | -.00230 | -.00252 | .00573 | 158.17647 | .09498 |
| 10.330 | 9.965 | -.02511 | 148.72381 | .11211 | .05899 | -.00099 | -.00343 | -.00251 | .00588 | 158.19581 | 1.29303 |
| 10.330 | 15.101 | -.03444 | 148.88607 | .25711 | .05618 | .00264 | -.00437 | -.00238 | .00570 | 157.99941 | 1.92711 |
| 10.330 | 20.188 | -.03853 | 148.83213 | .44158 | .05728 | .00344 | -.00481 | -.00244 | .00484 | 157.91571 | 1.91473 |
| 10.330 | 25.380 | -.04244 | 148.85292 | .65857 | .05832 | -.00103 | -.00508 | -.00285 | .00368 | 158.08310 | 1.70172 |
| 10.330 | 30.549 | -.04822 | 148.64397 | .90167 | .05805 | -.01347 | -.00580 | -.00306 | .00258 | 158.02839 | 1.46965 |
| 10.330 | 35.694 | -.05782 | 148.71232 | 1.15395 | .05856 | -.03179 | -.00639 | -.00347 | .00165 | 158.10243 | 1.25719 |
| | GRADIENT | -.00046 | .03074 | .01513 | -.00171 | .00219 | -.00010 | -.00002 | .00007 | .00680 | .19126 |

QAB2 CFHT113 MODEL 32-O CRB W/N85 (MIXED GAS)

(RHLMO8) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q (PSF) = 150.000
 PCRC5 = 160.000 TCRC5 = 80.000
 T/OA = 47.500 PCTHE = 85.000
 PCTAR = 15.000 RN/L = 1.000

RUN NO. 75/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -10.447 | -.02129 | 148.88392 | -.20295 | .10933 | -.05189 | .00069 | -.00173 | .00047 | 160.20485 | -1.24359 |
| 10.330 | -5.379 | -.02660 | 148.89532 | -.13946 | .09242 | -.03810 | -.00084 | -.00174 | .01144 | 160.11135 | -1.23879 |
| 10.330 | -.244 | -.01863 | 148.99996 | -.05855 | .07780 | -.03221 | -.00002 | -.00258 | .00513 | 160.18525 | -.74590 |
| 10.330 | 4.898 | -.01881 | 149.08035 | .02074 | .06937 | -.02025 | -.00039 | -.00240 | .00387 | 160.19505 | .20795 |
| 10.330 | 10.023 | -.02194 | 149.15608 | .11762 | .06272 | -.00970 | -.00209 | -.00310 | .00811 | 160.00807 | 1.27579 |
| 10.330 | 15.144 | -.02983 | 149.02804 | .26889 | .06041 | -.00467 | -.00307 | -.00243 | .00534 | 160.11135 | 1.88885 |
| 10.330 | 20.207 | -.03817 | 149.08984 | .45163 | .06142 | -.00237 | -.00414 | -.00185 | .00280 | 159.86023 | 1.88462 |
| 10.330 | 25.366 | -.04390 | 149.02459 | .66684 | .06268 | -.00796 | -.00463 | -.00175 | .00085 | 160.03743 | 1.68167 |
| 10.330 | 30.553 | -.05114 | 149.12765 | .91250 | .06331 | -.02103 | -.00534 | -.00183 | -.00050 | 160.18525 | 1.45381 |
| 10.330 | 35.486 | -.05771 | 149.29191 | 1.15606 | .06254 | -.03877 | -.00615 | -.00236 | -.00140 | 159.91460 | 1.25345 |
| | GRADIENT | .00000 | .01175 | .01543 | -.00184 | .00233 | -.00007 | .00004 | -.00025 | .00191 | .18557 |

DATE 31 OCT 74

TABULATED SOURCE DATA - OA82

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OA82 CFHT113 MODEL 32-O CRB W/N49 (MIXED GAS)

(RHLMO9) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = 158.000 TCRC5 = 85.000
 T/QA = 47.500 PCTHE = 100.000
 PCTAR = .000 RN/L = 1.000

RUN NO. 77/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|---------|---------|-----------|---------|---------|---------|---------|---------|--------|-----------|----------|
| 10.330 | -10.400 | -.01210 | 149.72132 | -.20471 | .10263 | -.04395 | -.00032 | -.00357 | .00626 | 158.14748 | -1.32577 |
| 10.330 | -5.363 | -.01875 | 149.53933 | -.13511 | .08762 | -.03178 | -.00113 | -.00245 | .00848 | 158.08310 | -1.26498 |
| 10.330 | -1.175 | -.01916 | 149.52581 | -.06239 | .07251 | -.02426 | -.00174 | -.00218 | .00551 | 158.10243 | -.85511 |
| 10.330 | 4.919 | -.02082 | 149.64214 | .01319 | .06380 | -.01327 | -.00224 | -.00227 | .00585 | 158.09277 | .11852 |
| 10.330 | 10.048 | -.02750 | 149.70191 | .11204 | .05766 | -.00201 | -.00323 | -.00224 | .00610 | 158.17647 | 1.31377 |
| 10.330 | 15.230 | -.03364 | 149.78766 | .25782 | .05348 | .00171 | -.00420 | -.00214 | .00581 | 158.16680 | 1.93130 |
| 10.330 | 20.347 | -.03850 | 149.82347 | .43884 | .05573 | .00272 | -.00458 | -.00237 | .00482 | 157.99941 | 1.91385 |
| 10.330 | 25.578 | -.04160 | 149.81911 | .65662 | .05734 | -.00155 | -.00306 | -.00279 | .00344 | 158.17647 | 1.69315 |
| 10.330 | 30.521 | -.04832 | 149.70074 | .88416 | .05714 | -.01258 | -.00570 | -.00293 | .00226 | 158.24082 | 1.47043 |
| 10.330 | 35.718 | -.05680 | 149.73460 | 1.13559 | .05323 | -.03030 | -.00649 | -.00332 | .00111 | 158.17647 | 1.25707 |
| GRADIENT | | -.00033 | .02284 | .01484 | -.00171 | .00216 | -.00010 | -.00002 | .00007 | -.00190 | .19113 |

OA82 CFHT113 MODEL 32-O CRB W/N85 (MIXED GAS)

(RHLM10) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = .0000 IN.
 BREF = 936.6800 IN. ZMRP = 375.0000 IN.
 SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
 PCRC5 = 160.000 TCRC5 = 85.000
 T/QA = 47.500 PCTHE = 100.000
 PCTAR = .000 RN/L = 1.000

RUN NO. 78/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q(PSF) | CN | CA | CLM | CBL | CYN | CY | PCRC5 | L/D |
|----------|---------|---------|-----------|---------|---------|---------|---------|---------|---------|-----------|----------|
| 10.330 | -10.431 | -.02038 | 149.43990 | -.20073 | .10885 | -.05182 | .00063 | -.00191 | .00022 | 160.11139 | -1.24122 |
| 10.330 | -5.335 | -.02425 | 149.61161 | -.13852 | .09136 | -.03738 | -.00085 | -.00189 | .01184 | 160.31343 | -1.24632 |
| 10.330 | -1.307 | -.01886 | 149.53848 | -.05827 | .07807 | -.03117 | -.00023 | -.00211 | .00355 | 160.41673 | -.73811 |
| 10.330 | 4.782 | -.01814 | 149.72592 | .01965 | .06928 | -.02087 | -.00038 | -.00201 | .00282 | 160.33304 | .19546 |
| 10.330 | 10.078 | -.02152 | 149.87420 | .11996 | .06248 | -.00968 | -.00223 | -.00300 | .00809 | 160.27875 | 1.29931 |
| 10.330 | 15.218 | -.02921 | 149.84248 | .26828 | .06045 | -.00471 | -.00301 | -.00248 | .00567 | 160.41673 | 1.88738 |
| 10.330 | 20.359 | -.03813 | 149.79250 | .45392 | .06099 | -.00280 | -.00399 | -.00178 | .00290 | 160.07219 | 1.87980 |
| 10.330 | 25.568 | -.04261 | 149.67567 | .66357 | .06219 | -.00813 | -.00438 | -.00174 | .00072 | 160.18525 | 1.68272 |
| 10.330 | 30.453 | -.04830 | 149.71489 | .90058 | .06276 | -.02017 | -.00504 | -.00192 | -.00053 | 160.09176 | 1.45828 |
| 10.330 | 35.424 | -.05478 | 149.85836 | 1.14681 | .06250 | -.03864 | -.00583 | -.00215 | -.00224 | 160.06240 | 1.25325 |
| GRADIENT | | .00014 | .03684 | .01531 | -.00173 | .00202 | -.00003 | .00002 | -.00014 | -.01645 | .18345 |

OA62 CFHT113 MODEL 32-0 ORB W/N32 (MIXED GAS)

(RMLM11) (03 SEP 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.7000 IN.
 LREF = 474.8100 IN. YMRP = ,0000 IN.
 BREF = 936.8600 IN. ZMRP = 375.0000 IN.
 SCALE = ,0100

PARAMETRIC DATA

BETA = ,000 Q (PSF) = 150,000
 PCRCs = 159,000 TCRCs = 65,000
 T/QA = 47.500 PCTHE = 100,000
 PCTAR = ,000 RN/L = 1,000

RUN NO. 79/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

| MACH | ALPHA | BETA | Q (PSF) | CN | CA | CLM | CSL | CYN | CY | PCRCs | L/D |
|--------|----------|---------|-----------|---------|---------|---------|---------|--------|---------|-----------|----------|
| 10.330 | -10.388 | -.03318 | 149.50626 | -.20429 | .10822 | -.03116 | .00032 | .00097 | -.00324 | 158.06378 | -1.26569 |
| 10.330 | -5.242 | -.03846 | 149.38030 | -.13184 | .09339 | -.03756 | -.00093 | .00247 | -.00723 | 158.08310 | -1.16624 |
| 10.330 | -.258 | -.04630 | 149.29344 | -.05809 | .07443 | -.03366 | -.00252 | .00310 | -.01414 | 158.17647 | -.77329 |
| 10.330 | 4.871 | -.07298 | 149.36139 | .02040 | .06939 | -.02168 | -.00398 | .00945 | -.01996 | 158.17647 | .20363 |
| 10.330 | 10.026 | -.05528 | 149.50436 | .12030 | .06167 | -.01273 | -.00382 | .00528 | -.01360 | 158.15713 | 1.31998 |
| | GRADIENT | -.00516 | .01325 | .01530 | -.00098 | .00234 | -.00067 | .00085 | -.00113 | -.00000 | .19047 |